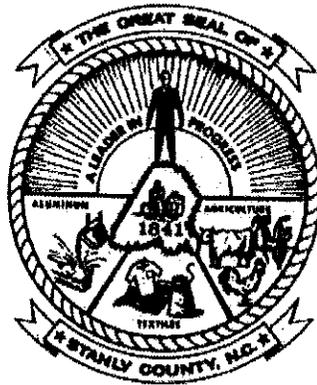


Solid Waste Management Plan Update

July 1, 2012 – June 30, 2022

**Stanly County
Planning Area**



Stanly County Solid Waste Department
Planning Advisory Council

Revise June 2012

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INTRODUCTION

This update to the Solid Waste Management Plan was prepared in accordance with N.C. General Statute 130A-309.09A (b) for the purpose of meeting local solid waste needs and protecting public health and the environment. The sections of the plan are ordered as listed in the General Statute. Consideration has been given to the Planning Elements Guidance Document and Program Recommendations for Solid Waste Planning Updates provided by the NC Department of Environment and Natural Resources, Division of Waste Management.

Through implementation of this comprehensive solid waste management plan and the plan updates prepared periodically, the Stanly County planning area provides for the management of solid waste and its reduction through June 30, 2022. The planning area includes Stanly County and the following municipalities: Albemarle, Badin, Locust, New London, Norwood, Oakboro, Richfield, Stanfield, Red Cross and Village of Misenheimer.

Stanly County's long-range vision is for a comprehensive waste management program. This program would provide disposal capacity, waste collection services, and waste reduction programs to all members of the community at an equitable price. The vision includes the elimination of improper disposal of waste and expanded waste reduction opportunities that are convenient for residents and assessable to business and industry. The vision is for a community that understands the environmental benefits of waste reduction and proper waste disposal. The community foresees some financial expenditure, but intends to keep them at a reasonable level. This vision is translated into five long-range planning goals listed below.

Planning Area Goals

- Goal 1.** To provide everyone in the county with waste collection and disposal services, waste reduction opportunities.
- Goal 2.** To increase the efficiency and cost-effectiveness of the solid waste program.
- Goal 3.** To meet the established local waste reduction goals.
- Goal 4.** To decrease improper waste disposal.
- Goal 5.** To protect public health and the environment.

Part I. GEOGRAPHIC AND SOLID WASTE STREAM EVALUATION

Geographic Area

This solid waste management plan covers Stanly County and its ten incorporated municipalities. An estimated 48% of Stanly County's residents live in unincorporated areas (see Table 1).

Table 1. Population taken from State of NC website www.osbm.state.nc.us.

<u>MUNICIPALITIES & COUNTY</u>	<u>POPULATION 2007</u>	<u>2011</u>
Albemarle	16,026	15,903
Badin	1,941	1,974
Locust	2,842	2,930
New London	597	600
Norwood	2,828	2,384
Oakboro	1,140	1,859
Richfield	512	614
Stanfield	1,293	1,486
Red Cross	772	744
Village of Misenheimer	677	713
<u>Stanly County - unincorporated areas</u>	<u>59,158</u>	<u>60,714</u>
TOTAL	87,786	89,921

The cities/towns listed, excluding Badin, provide solid waste management services to their residents by contracting with a private solid waste management company. The Town of Badin participates in the county-operated convenience center program.

Waste Stream Evaluation

Stanly County and its municipalities disposed of approximately 48,200 tons of waste in FY 2010-11 according to records kept by the facilities receiving waste from City of Albemarle Landfill. An estimate of the waste disposed in FY 2010-11 is shown in Table 2. These calculations are based on the actual tonnage of materials disposed at the City of Albemarle Landfill and at Uwharrie Environmental Landfill during the 2010-11 fiscal year through June 2011.

Table 2. Estimated Waste Disposed by Type, FY 10-11

<u>TYPE OF MATERIAL</u>	<u>2008 TONS</u>	<u>2011 TONS</u>	<u>PERCENT OF WASTE STREAM</u>
Construction/Demolition	22,397	3,136	20%
Un-separated MSW	49,919	48,200	80%
TOTAL	72,316	51,336	100%

Source: City of Albemarle & Uwharrie Environmental Landfill Records

The county uses Uwharrie Environmental MRF Permit 6202-MRF to separate our co-mingled recyclables. We have nine collection centers that have recycle bins that collect cardboard, newspaper, plastic, clear glass, aluminum cans, steel cans and other metal and wood. Collection centers staff reminds residents of proper sorting of recyclables. Brochures contain recyclable material listing, phone numbers and other information is available at each site. Recyclables are transferred by Republic Services LLC to the Uwharrie Environmental MRF to process. Yearly reports are sent to the Stanly County Solid Waste Dept

Table 3. Uwharrie Environmental MRF

MATERIAL	Tonnage 2010-11
	CO-MINGLED ALL BELOW
Cardboard*	"
Newsprint*	"
Total Plastics	"
Glass	"
Aluminum Cans	"
Steel Cans	"
Other metals	"
Wood	"
TOTAL	637

Table 4 lists four industries in Stanly County that participated in the Industrial Discards Project through the Dept. of Pollution Prevention and Environmental Assistance. The major materials generated by these industries are identified here. More information on this project is included in the section on recycling.

Table 4. Industrial Discard Project Participants

INDUSTRY	MAJOR MATERIALS GENERATED
American Fiber & Finishing	Fiber waste, gauze, paperboard tubes & cones, cardboard, textiles, pallets, wood waste, plastic wrap
Clayton Mobile Homes	Wood waste, vinyl siding, carpet and carpet padding, paper tubes, cardboard, foam board, film plastics, pallets
Michelin Aircraft Tire Corp.	Storage of tires, shipping and handling, wooden pallets, cardboard
Preformed Line Products	Plastic resin waste, steel drums, pallets, cardboard, gay lords, fiber drums, wooden spools, office paper

Part II. LOCAL WASTE REDUCTION GOALS

The original plan established a local goal of 25% waste reduction to be reached by June 30, 2001 and a further goal of 40% to be reached June 30, 2006. A more realistic goal based on our progress thus far, our resources, population and economic growth is being set for FY 2009-10 at 15%. Our reduction goal for FY 2012-13 is 12%. According to the FY 98-99 Annual Report our waste reduction percentage was 1% with Stanly County being the only county in our region that did not show a negative waste reduction percentage.

The waste reduction goals can be converted from percents to tons diverted by examining population estimates and past waste disposal figures. The baseline year (FY 1991-92) disposal rate was 1.32 tons per capita (figure provided by the N.C. Solid Waste Section). The estimated per capita rate for FY 2000-01 is 1.20. At this per capita disposal rate, Stanly County would dispose 75,264 tons in FY 2015-16 and 76,769 tons in FY 2018-19. (see Table 5).

Table 5. Five and Ten-Year Waste and Population Projections

YEAR	POPULATION	WASTE DISPOSAL	PER CAPITA DISPOSAL RATE
Baseline Year, 1991-92	52,342		1.32
YEAR		PROJECTED WASTE DISPOSAL	
FY 2012-13	61,491	73,789	1.20
FY 2015-16	62,720	75,264	1.20
FY 2018-19	63,974	76,769	1.20
FY 2021-22	65,733	78,879	1.20

Source: population figures from NC Office of State Planning and baseline year per capita rate provided by NC Solid Waste Section

To meet the local goal of 5% per capita waste reduction in FY 2005-06 and 15% per capita waste reduction in FY 2009-10, Stanly County must reduce its per capita disposal rate to 1.14 and 1.02 tons per capita respectively (see Table 6). Using the new per capita rates, the target annual tonnage remaining for disposal by Stanly County would be 63,974 FY 2018-19 and 65,733 FY 2021-22. In other words, 11,068 tons of future annual waste disposed must be diverted from landfills in FY 2015-16 and another 11,180 tons in FY 2018-19.

Table 6. Targeted Waste Reduction, FY- 2015-16 and 2018-19 and 2021-22

CALCULATIONS	FY 2015-16	FY 2018-19	FY 2021-22
1. Baseline year per capita disposal rate (County figure provided by Solid Waste section)	1.32	1.32	1.32

Targeted per capita disposal rate for FY 2015-16, 2018-19 and 2021-22	1.02	1.02	1.02
Population for July 2016, July 2019 and July 2022	62,720	63,974	65,733
Projected tonnage for disposal in FY 2016-16, 2018-19 and 2021-22 at baseline disposal rate.	75,296	76,031	78,879
Targeted annual tonnage for disposal in FY 2015-16, 2018-19 and 2021-22	62,721	63,976	65,734
Targeted annual tonnage to reduce in FY 2015-16, 2018-19 and 2021-22	11,068	11,180	11,289

Source: staff calculations

Part III. MEETING THE WASTE REDUCTION GOALS

This updated plan is designed to reduce Stanly County's waste by, 11,068 tons FY 2015-16 and 11,180 tons in 2018-19 and 11,289 2021-22.. To do this, Stanly County will target the types of waste generated as shown in Table 7. How these wastes will be targeted is addressed in the detailed descriptions of specific waste reduction activities planned. (Part V)

Table 7. Approximate Waste Reduction by Material, FY's 2015-16, 2018-19 and 2021-22

WASTE TYPE	TARGETED TONS TO REDUCE FY 2015-16	TARGETED TONS TO REDUCE FY 2018-19	TARGETED TONS TO REDUCE FY 2021-22
Paper (OCC/ONP/Office Blend)	5535	5645	5757
Aluminum/Steel/Plastic/Glass/Organics	1382	1409	1437
Construction and Demolition (Pallets/Clean wood Waste)	4151	4234	4318
GOAL	11,068	11,288	11,512

Source: staff estimates

Paper Waste

This plan targets 5,535 tons in FY2015-16 and 5645 tons in FY 2018-19 and 5,757 tons for 2021-22 for reduction in paper waste. Table 8 summarizes the paper waste reduction methods to be used to meet the local goals. School and community education are not listed because they are expected to affect each of the other waste reduction methods listed. Specific activities planned are described in Part V.

Table 8. Paper Waste Reduction

REDUCTION METHOD	TARGETED MATERIALS
Source Reduction	Office Paper Blend, Mixed Paper, Magazines & Catalogs

Recycling	Corrugated Cardboard, Newsprint, Office Paper Blend, Magazines & Catalogs
Reuse	Corrugated Cardboard Boxes, Magazines & Catalogs

Source: staff estimates

Construction/Demolition

The goal for reducing construction/demolition waste is approximately 4151 tons in 2015-16 and 4234 tons in FY 2018-19 and 4,318 FY2021-22. The largest generators of construction/demolition waste will be specifically targeted in this effort. Table 9 summarizes construction/demolition waste reduction methods.

Table 9. Construction/Demolition Waste Reduction

REDUCTION METHOD	TARGETED MATERIALS
Source Reduction	Clean Wood Waste, Pallets, Processing Wastes Gypsum
Recycling	Clean Wood Waste, Pallets, Vinyl Siding, Carpet, Gypsum, Corrugated Cardboard, Plastic Wraps, Scrap Metals
Reuse	Clean Wood Waste, Pallets, Process Waste
Mulching	Clean Wood Wastes, Land Clearing Debris
Source: staff estimates	

Aluminum/Plastics/Steel/Glass/Organics

It is estimated that 1382 ton in FY 2015-16 and 1409 tons in FY 2018-19 and 1,437 FY 2012-22 can reduce these waste streams. The proposed reduction methods and targeted wastes are shown in Table 10.

Table 10. Aluminum/Plastics/Steel/Glass/Organics

REDUCTION METHOD	TARGETED MATERIALS
Recycling	Aluminum Cans, Steel Cans, Plastic Bottles & Jugs, Glass Bottles & Jars
Backyard Composting	Household Organics, Yard Waste

Source Reduction	Containers, Organics
Source: staff estimates	

Part IV. THE PLANNING PROCESS AND PUBLIC PARTICIPATION

The Stanly County Environmental Affairs Board along with representatives from each of the County's nine municipalities (see Appendix A) assisted in the development of this update. County solid waste staff wrote the document.

Stanly County's Environmental Affairs Board was established in April of 1990 and functions as an extra-governmental organization of knowledgeable citizens serving to provide technical information and supplemental advise to the Stanly County Board of Commissioners to aid them in maintaining or improving the environmental conditions of Stanly County. The Board consists of nine voting members representing the following categories: Municipal-1, Education-1, Industry-3, Agriculture-1, and at-large citizens-3. Also serving on the Board in an ex-officio capacity are the Stanly County Solid Waste Director, Health Director, Emergency Management Director and Agriculture Extension Representative.

During the period preceding the actual writing of this update to the solid waste plan, representatives from the County's municipalities attended meetings of the Environmental Affairs Board and participated in planning sessions. Discussions were held concerning goals and infrastructure needed for progress.

**Part V. SOLID WASTE MANAGEMENT METHODS:
ASSESSMENT OF PROGRAMS AND DESCRIPTION OF INTENDED ACTIONS**

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

A. Source Reduction

Source reduction has been addressed in Stanly County "in general" as a part of all education efforts. It is included in the Reduce-Reuse-Recycle theme used in programs that are directed to residents, students, civic groups and the commercial and industrial sector. These programs or promotional activities may focus on waste prevention, recycling, composting or the proper management of special wastes, but all begin with source reduction as the top priority.

The Stanly County Environmental Affairs Board has established an Environmental Achievement Award Program for small businesses, large businesses and the public sector. Source reduction is one of the criteria for these awards. This award program will be altered somewhat to allow for recognition of efforts which come to the attention of the board by any means, not just by award application from the business, industry or institution.

On July 3, 1995 the Stanly County Board of Commissioners adopted a resolution supporting waste reduction efforts in county government operations. This resolution will be resubmitted for adoption by the current board of commissioners. A renewed effort to obtain support for

source reduction and recycling within the governmental complexes will be undertaken in FY 2003-04.

The county, in conjunction with the Cooperative Extension Service, offers the Enviroshopping Program to different civic groups, retirees, clubs, etc. This program educates people about making environmentally friendly purchasing choices. Topics to be covered include buying reusable items, recycled items, and recyclable packaging. The Cooperative Extension Service has all the educational materials necessary, but more active promotion of program is needed. Lack of staff time for these programs is a problem for local Coop. Ext. Service as it is for the county's solid waste director.

Grass cycling and Xeriscaping has been and will be promoted along with backyard composting. More information on the backyard-composting program can be found in the section on composting. The use of non-toxic materials is promoted in conjunction with the Household Hazardous Waste Collection Program, which is also covered in another section.

A survey of waste reduction practices in place in the commercial/industrial/institutional sector is being planned. Source reduction education and promotion of Waste Wise and Climate Wise can easily be incorporated in this effort.

B. Collection of Solid Waste

Waste in the unincorporated areas is collected by the county at nine collection ("convenience") centers located mostly in the rural areas of the County. County personnel from 7:00 AM to 6:00 PM at five sites staff the centers for five days per week and at four sites for four days per week. One site is operated on Sunday afternoons between 1:00-6:00 PM from Memorial weekend through Labor Day weekend to accommodate nearby lake homes. Residential solid waste is accepted at each center in an enclosed compactor. A private hauler to the City of Albemarle Landfill hauls the waste. A variety of recyclable materials are also accepted. (See Section C) Unincorporated residents in the county have the option of contracting with a private hauler for waste pickup service at their household. This waste is also hauled to the City of Albemarle Landfill.

The county has a hauling contract with Republic Services, which will expire June 30, 2016. Waste is collected inside the corporate limits of the municipalities under contract arrangements between the municipality and a private hauler. Over the past several years, as contracts have expired, most of the municipalities have reduced their involvement in the commercial and industrial services. The existing municipal hauling contracts cover mainly residential services. Many of the municipalities contract for annual or semi-annual cleanup days in which items are accepted which are not provided for under the weekly collection program.

Stanly County Solid Waste Dept. and the City of Albemarle have sponsored a Household Hazard Waste event once a year for the past fourteen (14) years. In April of 2005 the HHW event also included an Electronic Recycle event. Household Hazardous Waste and Electronics is now a same day event.

The commercial and industrial sector contracts for hauling services with one of the private waste haulers licensed to haul garbage in the county. A few companies haul some or all of their own waste.

Table 11. Waste Hauling Information, FY 2010-11

HAULERS	RESIDENTIAL WASTE	NON - RESIDENTIAL WASTE	C&D WASTE	TONS HAILED	DISPOSAL DESTINATION
Republic Services		X	X		Uwharrie Environmental Landfill & City of Albemarle landfill
Waste Mgmt.	X	X	X		City of Albemarle Landfill, Uwharrie Environmental and Piedmont Sanitary Landfill

The county will continue to own and operate "convenience centers" to collect waste and recyclables from rural areas of the county. During FY 2010-11 competitive prices were obtained from service providers, which were used to compare the county's existing collection system to various other options for collection. The existing system was the most cost-effective method.

The county's municipalities, excluding Badin, which operates as an unincorporated area relative to solid waste collection and recycling, have contracts with private haulers for residential collection services. Some are involved to a degree in the services provided to the non-residential sectors.

C. Recycling and Reuse

Recycling

Stanly County has been working since 1991 to maintain a stable recycling program. The county operates nine "staffed" convenience centers for residential garbage collection and recycling. The recycling program was implemented in April 1991. Item currently accepted as followed:

Aluminum Cans
 Newspaper
 Corrugated Cardboard
 Clear Glass

Steel Food/Beverage Cans
 Un-crushed oil filters
 Plastic Bottles/Jugs
 Brown Paper Bags

Used Motor Oil
 Used Anti-Freeze
 *Magazines & Catalogs
 *Office Paper

- Four convenience centers are equipped to accept magazines and catalogs from the public.
- One convenience center is equipped to accept office paper from businesses and institutions along with material from the county's internal office paper recycling program.
- One convenience center is equipped to take white goods

Aluminum cans, steel cans, newspaper, corrugated cardboard, and plastic bottles/jugs, are co-mingled in roll-off recycling containers and hauled when full to the Uwharrie Environmental Recycling Complex just outside Troy. Roll-off recycling units are located at four convenience centers for the collection of magazines & catalogs. These are hauled when full to Uwharrie Environmental Recycling Complex. One convenience center is equipped for acceptance of an office paper blend.

Glass bottles and jugs are accepted at all nine sites mingled with other recyclables. Recycling is unable to accept the green or brown glass due to the poor market conditions for this color.

Used motor oil is collected from residents at all nine-convenience centers in 350-gallon tanks. These tanks are pumped as needed by Haz-Mat, Charlotte, N.C. Used anti-freeze is collected from residents at three of the nine convenience centers and is also picked up by Haz-Mat.

The county does not receive any revenue on recycling. A pumping charge of \$60 is charged to the county when the anti-freeze tanks are emptied. This is not often due to the low volume of anti-freeze collected.

The amount of materials recycled by the county-operated program plus programs operated by the City of Albemarle are shown in Table 12.

Table 12. Residential Recycling in Tons, FY 2010-11

MATERIAL	COUNTY TONS	ALBEMARLE TONS	COMBINED TONS
Glass - clear	co-mingle	co-mingle	x
Plastic Bottles & Jugs	co-mingle	co-mingle	x
Aluminum Cans	co-mingle	co-mingle	x
Steel Cans	co-mingle	co-mingle	x
Newspaper/Tele Books	co-mingle	co-mingle	x
Corrugated Cardboard	co-mingle	co-mingle	x

Office Paper	co-mingle	co-mingle	x
White goods/Other Metals		106	106
Used Motor Oil	8,259		8,259 gals
Anti-Freeze	350gals.		350 gals
Tires		1003	1003

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

Much of these materials, which can be recycled, remain in the waste stream. The waste stream also contains other items that could perhaps be recycled in a cost-effective manner.

The residential recycling program being operated by the county through the convenience centers is open to all citizens living in unincorporated areas. The citizens of Badin participate in the county program. The City of Albemarle has discontinued their comprehensive curbside program for its citizens. The Town of Norwood picks up some items curbside, which are recycled. These are white goods, metals, furniture, batteries and tires. Locust, Oakboro, Stanfield collect white good, metal furniture on annual basis. The Village of Misenheimer, Town of New London and the Town of Richfield has a combined contract with Waste Management for curbside pick up house hold trash and recyclable materials. (added recycle info for Misenheimer, Richfield and New London 5/2012)

Materials collected for recycling in the county must go direct to market or to a processing center outside the county. This is a factor which affects the recycling programs operated by the county, for the City of Albemarle and recycling efforts of individual businesses, industries and institutions. The absence of a drop-off facility has made it difficult for small-medium sized businesses to participate in a recycling program. The predominant private waste hauler now offers containers for collection of corrugated cardboard, but the cost of the service appears prohibitive to many in Stanly County.

It is unclear how much material business, industry and institutions are recycling, but it is clear that some very good programs for waste reduction and recycling exist in this sector. Stanly County participated in the Industrial Discards Project in partnership with DPPEA and five of our industries. We discovered that several of these industries were doing almost all that could be done and several really needed some help. We anticipate that this is true across the board.

Participation in the recycling programs offered in Stanly County can be increased. Participation in the convenience center program is approximately 20% using an average of the nine sites. The City of Albemarle's curbside program had an average 30% participation rate; it was discontinued as of July 1, 2003.

The convenience center recycling program can be made more user-friendly and this has been addressed somewhat through the co-mingling of materials. Programs, which create an economic incentive for citizens to recycle such as "Pay-As-You-Throw" programs, have not been implemented here due to the problems inherent with these programs and the increased

cost of operation and management. These methods are not being ruled out, however. There are very real benefits to be realized for those local governments that can find ways to minimize the negatives and effectively balance the fees charges for the cost of the program to what the citizens are willing and able to pay. Education plays a large role here as in all solid waste reduction efforts.

Reuse

The Stanly County Community Christian Ministries runs the largest reuse program in the county. The Clothing Closet operates as a part of the Christian Ministries program and accepts reusable items from the public for donation or sale back to the public. Items donated to these non-profit programs include large household appliances, furniture, food, clothing, house wares, toys etc. The Mission Thrift Shop operates a program similar to the Christian Ministries. Many area consignment shops operate "reuse programs" for a profit.

Locating a swap shop at one convenience center was considered as a possible grant proposal but was not submitted due to management's concern over liability issues. It may be that this can be considered again at least on a small scale. Many items are brought to the convenience centers that are quite suitable for reuse.

D. Composting and Mulching

Composting

Backyard composting has been encouraged by the county and through the Cooperative Extension Service as part of the overall solid waste education effort since the implementation of the program back in 1991. Projects completed in the first phase of the solid waste plan are listed in the paragraphs below. Planned projects follow.

A composting demonstration project has been constructed at the Stanly County Agri-Civic Center. This was a cooperative effort of the 4-H Discovery Program, the Cooperative Extension Service, the Keep Stanly Beautiful Committee and the Stanly County Public Works Office. Several businesses donated materials and services. Kids from the 4-H Discovery Program built the compost bins from materials, which were salvaged or donated for this purpose. Some bins were made from pallets, some from wood and screen wire, some from barrels and one with concrete blocks. The demonstration site includes several different designs. The site is located adjacent to the parking area of the large "Agri-Civic Center" and has high-visibility. The Cooperative Extension Service gives out educational brochures to those visitors expressing an interest.

As a part of the Extension Service's, compost bins built by participants in the 4-H Discovery Program were displayed at the fairgrounds. Mini compost bins were built using rabbit wire, aluminum pie pans, string and leaves. At end of the day each child had its own small compost bin.

The City of Albemarle has a low-tech leaf-composting project. Leaves, which are collected in the city, are delivered to a site where they are allowed to compost over time. (5/2012)

Mulching

Yard waste and clean wood waste are accepted at the City of Albemarle Landfill in a separate area to wait grinding into mulch. Periodically, bids are solicited from wood waste grinding contractors and the low bidder is contracted to grind all collected debris.

The Town of Badin provides leaf collection and makes this material available to residents for mulching purposes. They also pick up brush and chip this material. The Town of Badin on parks and street right-of-ways uses the mulch.

The Town of Locust provides an annual leaf pickup. They plan to continue this service and to distribute the leaves locally.

The Town of Oakboro provides an annual leaf pickup and a semi-annual limb pickup. Limbs are chipped and given to residents for mulch.

The Town of Norwood provides leaf pickup and also chips brush. Leaves are given to farmers for bedding. Chips are given to town residents.

The Town of New London provides an annual leaf pickup and a semi-annual limb pickup, which are accepted by the City of Albemarle Landfill for chipping and mulching. (2012)

The Village of Misenheimer provides leaf, limb & grass clipping pickup twice a year and taken to the City of Albemarle Landfill. (2012)

Leaves and other yard wastes will continue to be accepted at the City of Albemarle Landfill where a mulching operation will continue to operate. Mulching of this material will continue to be promoted in education efforts focused on the residential and business sector. Incentives for the separation of clean wood waste from other material classified, as construction/demolition waste will be used to increase the materials being processed in this manner versus being land filled.

E. Incineration with Energy Recovery

Incineration with energy recovery is not part of the county's current program. The county considers it an inappropriate waste management option due to local waste volume and flow, public opinion, and capital/operating costs. The county does not plan to use incineration with energy recovery.

F. Incineration without Energy Recovery

Incineration is not part of the county's current program. The county considers it an inappropriate waste management option due to local waste volume and flow, public opinion, and capital/operating costs. The county does not plan to use incineration without energy recovery.

G. Transfer of Solid Waste Outside Geographic Area

There are no transfer stations being operated in Stanly County at this time; however, some solid waste is hauled out of the geographic area directly to landfills in nearby counties. Some waste from Stanly County is hauled to transfer stations located outside Stanly County.

A study of solid waste management options by David M. Griffith & Associates was completed in 1992. This study evaluated various options for managing Stanly County's waste including the capital, operating, maintenance and debt service costs associated with building a transfer station and hauling waste to the Uwharrie Environmental Landfill in Montgomery County and to a landfill for which construction was being considered in Anson County. The results of this study indicated that these options would be more expensive than the construction of a lined facility at the existing landfill here in Stanly County. Another study done by Camp, Dresser & McKee around the same time determined that the existing landfill site was suitable for expansion.

The transfer of solid waste on a large scale such as with operation of a transfer station is not expected at this time. The City of Albemarle has constructed a Subtitle D Sanitary Landfill for the use of the entire county. They also own and operate a construction/demolition landfill at the site of the closed unlined landfill. If the City of Albemarle were to discontinue operations for whatever reason, a transfer station would be an option.

H. Disposal of Solid Waste

The City of Albemarle, Stanly County's largest municipality, owns, operates and has recently expanded the landfill facility, which has served Stanly County since the early seventies. Most of the waste generated in Stanly County is disposed at this site. A Subtitle D sanitary landfill is in operation as well as a construction/demolition landfill.

The lined expansion, consisting of a 4 approved phases is expected to provide up to 30 years of capacity. The first cell, Phase I, has been temporarily capped and the second cell, Phase 2 is currently in operation. (5/2012)

Stanly County has explored regional public disposal with two neighboring counties, but with the continued operation of a permitted facility, owned and operated by our largest municipality and located within our borders, it doesn't appear feasible, at this time, to divide the County's residential waste stream and haul a portion of it out of the county.

Other options for disposal of solid waste from Stanly County do exist. The Uwharrie Environmental Landfill is located a relative short distance from Stanly County and their management personnel appear eager to work with Stanly County on disposal. Some businesses within Stanly County are currently using the Uwharrie facility for their disposal needs.

Disposal capacity should also be available to Stanly County at BFI's Speedway Landfill and at the Piedmont Sanitary Landfill in Kernersville. It appears that regional landfill development may still take place in Anson County also.

Stanly County will continue to send waste collected at the county convenience centers to the City of Albemarle Landfill for disposal, as long as it is feasible to do so. Other options for disposal of waste generated by the residential sector would require increased collection and transport cost.

With the expiration of Stanly County's exclusive hauling agreement with Waste Management on June 30, 1997, the county has less control over waste disposal in the county. Decisions as to what facility to utilize are made by individual municipalities, business and industry and in many cases the haulers themselves.

Should it become necessary for Stanly County to take further action to ensure disposal capacity for wastes generated within the county as a whole, all options will be considered. This would include operation of facilities within Stanly County and transport of waste outside Stanly County.

Part VI. EDUCATION, SPECIAL WASTES, ILLEGAL DISPOSAL, PURCHASING AND DEBRIS MANAGEMENT:

A. Community and School Education

Community Education

Educational pamphlets describing the locations of collection centers, recyclable materials accepted, and how to prepare materials for recycling (e.g. wash and remove lids) have been produced and distributed by Stanly County. The solid waste director gives educational presentations to civic groups throughout the county, and the recycling program is promoted at community events. A waste reduction workshop has been held for the commercial/industrial/institutional segment. A newsletter has also been published for this sector. The City of Albemarle has provided educational flyers for its citizens and has cooperated with the county's effort. The other towns plan to increase their effort to encourage their citizens to participate in programs offered by the municipality and by the county.

The local newspaper has been utilized many times to help educate and inform the community, with stories about particular events and with paid advertising. Education efforts have been both general, such as the Reduce-Reuse-Recycle theme, and specific, as in an ad featuring a large refrigerator telling the public about its proper disposal. Radio advertising as well as the local cable channel has been utilized for educational purposes.

Stanly County has a web site at www.co.stanly.nc.us. Departmental information is listed and assessable on the web site. The locations and operating hours of the convenience centers are listed as well as all the particulars of the recycling program. Plans are to further utilize this site to promote events such as a composting workshop or litter cleanup event.

The attendants at the convenience centers provide a great deal of education to the users of the sites. Approximately 7,000 cars go through the convenience centers in a given week. Flyers that educate and promote are handed out frequently.

The level of participation in recycling can be increased by more intense public education. This is also true for other desired waste management methods, which we wish to promote.

Brochures developed by Stanly County describing the location of convenience centers, recyclable materials accepted and how to prepare materials for recycling need to be updated. Program changes have occurred and a *new* design would be more apt to receive attention. General information on solid waste management will be incorporated into the new brochures. An example of this is the requirement that waste hauled across the roadways be covered or contained in such a manner as to prevent litter. Brochures of this type are utilized now, but many of these need to be combined.

Some efforts to educate the community will focus on specific problem areas such as illegal dumping. Other efforts will be aimed at increasing awareness of reuse opportunities such as donating items to the Christian Ministries or the Thrift Shop. Specific materials will be developed to help educate the public about the proper management of used motor oil and discarded white goods. These materials can be utilized in places where large quantities of these items are sold.

Education efforts sponsored by the County will be promoted by the municipalities to their citizens through the posting of flyers in town halls, notices on water bills and other means at their disposal.

School Education

The solid waste director provides classroom programs with a Trash - Talk theme within the school system on a quarterly basis. Notification is sent to the teachers concerning the availability of these programs through the community schools coordinator, this program is done in elementary grades.

The Cooperative Extension Services has been active in the past, to reach our school children with this message. The extension homemakers and agriculture extension agents have also provided education programs in our schools when possible.

The Stanly County Environmental Affairs Board provided a copy of the video The Rotten Truth for each of the elementary schools. This video gives information on waste management issues and encourages responsibility in a very entertaining way. The solid waste director also has a collection of other videos, which address solid waste management and which range on grade/age level, from pre-school to adult. These are loaned to schools and others as needed.

The Keep Stanly Beautiful Committee has sponsored educational events for the elementary schools. A play called "Trash" was presented for several years. FY 06 KSB is investigating the possibility of matching grant monies for school projects.

A Project Tomorrow Environmental Education Grant was awarded to the Stanly County Library from the Office of Environmental Education. This grant request was a combined effort of the library, solid waste office and the school system. Two sets of educational videos were purchased. One set is used in the public library and one set is used by the school system.

Funds have been issued for the FY 2010-11 Budget to allow for distribution of a school newsletter called "Trash Talk" to the 3rd, 4th, and 5th grade students in Stanly County. This is a quarterly newsletter, which is very informative and attractive. It contains information on waste reduction and recycling and is customized to promote local programs and events. The distribution of this newsletter on a continued basis would ensure that all of the school children in a particular age group are reached with a comprehensive message.

Some recycling programs exist within the school system, but they are not usually school sponsored and many times are unable to be sustained. The solid waste director is working with the county schools to establish a comprehensive internal recycling program that will provide the students with "hands-on learning". Plans are to assist in implementation of a recycling program for corrugated cardboard, aluminum cans and an office paper blend at a minimum. The schools in Stanly County have problems related to overcrowding along with other issues. A bond referendum has recently passed which will help to solve some of the problems we have.

B. Special Waste Management

Tires

Tires generated in Stanly County are accepted free of charge at the City of Albemarle Landfill with proper documentation and tire forms. U.S. Tire leaves two empty trailers at the Albemarle facility and hauls full trailers to its facility in Concord, N.C. The City of Albemarle pays U.S. Tire Recycling \$78.00 per ton for the disposal/recycling of the scrap tires. A 10-ton minimum is required per trailer. There is also a fuel surcharge of \$50.00 per trip. (5/2012)

Funds from the statewide tire tax are transferred from Stanly County to the City of Albemarle as operators of the program serving the county as a whole. The funds pay a portion of the tire recycling program cost. U.S. Tire estimates that 1% of tires they collect are separated for sale as used tires or for recapping, 50% are shredded and used to line septic tank drain fields (DFM), 15% are converted to tire derived fuel (TDF) and 34% are monofilled.

White Goods Recycling Center

October 2011

(revised in Solid Waste Plan 5/2012)

The City of Albemarle Public Works Department's White Goods Recycling Center is located at the City of Albemarle Landfill. The landfill, which is owned and operated by the City, is located on Stony Gap Road off US Hwy 52 South. One acre has been set aside for the collection of scrap metals, white goods and CFC refrigerant recovery. The center also collects vehicle & equipment batteries, corrugated cardboard, pallets, tires, and several types of glass. The center consists of an 864 sq. ft. enclosed processing facility, four (4) free standing sheds, five (5) - 40 yard open-top roll-off boxes, an appliance dock, a lift truck equipped with a 360 degree rotating squeeze clamp, a one ton dump truck, and a roll-off truck. The building and sheds are situated on a concrete/asphalt pad and the roll-off boxes are positioned to the side, against a block wall, on asphalt. An asphalt roadway is built around the boxes for travel.

Municipalities located within Stanly County, which provide white goods collection for their residents, bring these items to the City of Albemarle Landfill. Citizens living in unincorporated areas are asked to bring their old appliances and white goods directly to the landfill. Commercial and industrial facilities also bring their white goods to the landfill. There is no charge for the disposal of white goods in accordance with GS 130A-309.81 (B) titled Restrictions. The City of Albemarle Public Works Department will keep records of all inbound white goods and report these figures annually in accordance with GS 130A-309.85.

Recycling Procedures:

Anyone bringing items to the White Goods Recycling Center must first stop at the scalehouse to have their items counted or weighed. The driver is then directed to the White Goods Recycling Center.

At the White Goods Recycling Center persons are directed to off-load items in the appropriate pre-designated areas. Tires are off-loaded into one of several 53 foot box trailers in a laced manner. Corrugated cardboard and pallets are placed in the appropriate storage area until shipped out and picked up by area vendors. Vehicle & equipment batteries are placed in the designated area until shipped and delivered to highest bidder. Ferrous scrap metals that need no further processing can be placed directly into one of the five 40 yard open-top containers. Items that contain both ferrous and non-ferrous metals such as lawn mowers and bicycles are off-loaded as directed and are then placed in the appropriate storage area until all fluids and tires can be removed and the items can be further processed into different categories. Items that contain mostly non-ferrous metals such as storm doors and windows are placed in the appropriate storage area until all glass can be removed for recycling and the non-ferrous metal placed in its designated container. White goods are off-loaded onto the appliance dock. Once off-loaded each white good is transported into the White Goods Processing Facility for refrigerant recovery and material separation.

Four separate refrigerant recovery systems are used during the recovery process, one for each of the most common white goods refrigerant types: (R-12, R-22, and R-134a), and one for unidentifiable or contaminated refrigerants. Each recovery station, including all recovery tools, recovery equipment, and cylinders are clearly labeled and designated for specific refrigerant types. Each time refrigerant is recovered, the type, date, and amount of refrigerant recovered is recorded on a recovery cylinder tag which is attached to each recovery cylinder. A separate log is also kept showing all daily recovery activity. Once a refrigerant recovery cylinder is at maximum safe capacity it is removed from the recovery process and is stored in a secure location. When necessary each viable refrigerant is then processed through an onsite refrigerant recycling system, and the recovery cylinder is labeled "in-house use". All refrigerants that are not used may be shipped to the highest legitimate bidder and or are exchanged through a refrigerant recovery cylinder exchange program, which is offered by various local vendors. When the refrigerant recovery process is complete each white good is then ready to be dismantled for maximum recovery of all recyclable materials. Capacitors and compressor oils are removed and set aside for proper disposal.

When all of the scrap items have been fully processed, the recovered recyclable materials are then separated by classification and placed in the appropriate pre-designated containers. All separated recyclable materials are securely stored and or warehoused until which time they are shipped to the highest bidder. Once the bidding process is complete, the recyclable materials are then delivered to awarded buyer.

White Goods

White goods are accepted at no charge at the City of Albemarle Landfill. These are processed as per the "White Goods Management Plan" outlined in the previous section."

The City of Albemarle provides weekly pickup of discarded appliances for their citizens. The Town of Norwood also provides this service. Most of the other municipalities offer annual or semi-annual cleanups, which include acceptance of white goods. (See revised White Goods Management Plan City of Albemarle Landfill.)

Any capital improvements that are needed can now be considered with the completion of the lined cell and relocation of various operations on the landfill site. Funds from the white goods disposal tax will be used for any capital projects if possible.

Some illegal dumping of white goods is taking place in Stanly County even with "free" disposal. Some citizens may be unaware of the proper disposal method and some do not wish to transport the units to the proper place. More education is needed along with enforcement of the Ordinance Governing Solid Waste Management in Stanly County.

Special collections of white goods are offered at one of the County's convenience centers, which is located on Newt Rd.. One of the reasons people dispose of these items improperly is their reluctance to haul them to the City's landfill. Offering this service through one-convenience centers has shown an improvement on some of the illegal disposal.

**CITY OF ALBEMARLE LANDFILL
ELECTRONICS RECYCLING PLAN**

(Addendum to Stanly County Solid Waste Management Plan – 12/2010)

Program

The City of Albemarle accepts electronics at our Solid Waste Facility located on Stony Gap Road in Albemarle, NC. A paved and concreted area consisting of several enclosed structures and free-standing carports is the staging area for the collection of recyclables, including electronics. Accepted electronics are as follows: computers, televisions, monitors, video recording or playing devices, radios and stereos, PDA's, cell phones, printers, fax machines, etc.

Anyone bringing approved items for disposal must stop at the scale house to have their items counted and weighed. A fee is collected for the disposal of these items. The disposer is then directed to the recycling area where an attendant monitors the placement of items into the appropriate area. Arrangements will be made with an accredited electronics recycler for pickup.

Public Awareness and Education

The City of Albemarle produces a Landfill brochure which outlines all disposal activities at our Solid Waste Facility. Electronics recycling will be included in this brochure. The City's website will be utilized to inform the public as well.

Tracking Tonnages

The City of Albemarle Public Works Department will keep records of all outbound electronics and report these figures in accordance with § 130A-309.09A.

Other Local Governments

No other local government units will be involved with the City's electronic waste management program. The County of Stanly may, at their discretion, direct citizens to our site.

Accounting

The City of Albemarle will establish a dedicated revenue line item for the receipt of all funds from the State Electronics Management program in our Landfill Fund. A separate expenditure line item will be designated for the expenses associated with the operation of the electronics recycling program.

Submitted: December 29, 2010

Lead-acid batteries

Current Program: Lead-acid batteries are accepted at the City of Albemarle Landfill and are recycled. Citizens delivering batteries to this facility are charged at the current recycling rate of \$15/ton. (5/2012)

Residents can also recycle these batteries with a number of auto parts dealers. Normally, there is no charge for the service and, depending on market conditions; at times the resident may receive a small amount of cash for the battery.

Batteries are not accepted at the convenience centers due to the availability of other recycling opportunities through the private sector. The sites are not equipped for proper storage of batteries. If at some point funds were made available, most sites could be equipped with sheltered units to allow for acceptance of batteries and to provide a covered area for the used motor oil collection. This area might also include some type of system for acceptance of latex paint.

Used Motor Oil

Collection of used oil is provided free to all citizens at the convenience centers. The individual municipalities do not collect used oil. The used oil tanks at the convenience centers are pumped periodically by Haz-Mat. Used motor oil is also accepted for recycling at several auto parts dealerships in the county.

Household Hazardous Waste

The county has included education on household hazardous waste (HHW) since solid waste programs were first developed early in 1991. Less toxic alternatives and proper management of HHW has been the focus of this education. Partly as a result of this education effort the citizens of Stanly County have been interested for some time in an alternative method of management for HHW. The Stanly County Environmental Affairs Board investigated the options in the early 90's, but the cost at the time was too high for a county our size to fund.

Stanly County held its Household Hazardous Waste Collection Event for the past fourteen (14) years, made possible by funding from the City of Albemarle and the County of Stanly. The event was and has been very successful in the past years. On April 30th 2011, the HHW and Electronics Recycling Event were held on the same day and at the same location. We collected 20,612 lbs of material that were paint related items collected by ECOFLO, and 18,146 lbs. of electronics collected by eCycleSecure LLC (at no cost to the county) that may have been land filled here in an unlined facility, or worse, was managed properly. There was 563 lbs of pesticide collected by the North Carolina Dept. of Agriculture & Consumer Services. The largest category of waste received was paint related items. The contractor's cost was \$16,123 and estimated 321 households were serviced.

Annual events of this type are planned until a better option can be put in place. In 2007 a convenience center was relocated to property adjacent to the Stanly County Agri-Civic Center. The Pesticide Container Recycling Program is now being housed by the Solid Waste convenience center located on Newt Rd. adjacent to the Stanly County Agri-Center.

Stanly County will continue to promote the use of non-hazardous product substitutes and other methods of source reducing household hazardous wastes. Flyers have been reprinted and continue to be distributed educating the public on purchasing the correct amount of paint and properly managing leftover paint. Cooperation will continue with the Agriculture Extension Service on the recycling of pesticide containers.

C. Prevention of Illegal Disposal and Management of Litter

Illegal Disposal - Promiscuous Dumping

Illegal disposal of solid waste is a problem in Stanly County. The problem of illegal dumping ranges from the dumping of construction and demolition debris to avoid landfill disposal fees to the burning of solid wastes by a homeowner to avoid transport to a convenience center. Illegal disposal of bulky items such as mattresses and white goods are of particular concern. Another area of concern is the disposal of yard wastes and land clearing debris as fill material for low-lying areas.

Stanly County adopted an ordinance in March of 1992 that governs how waste is to be managed in the unincorporated areas of the county. Requirements are included for storage, hauling and disposal of solid wastes. The local ordinance is used along with the North Carolina Solid Waste Management Rules to obtain cooperation from responsible parties relative to illegal dumping problems that are reported to the county's solid waste director. Stanly County revised their ordinance on April 21, 2003 for the solid waste dept. Any person who is found in violation of this ordinance as followed and authorized by the North Carolina General Statutes 153-A-123 as followed. (Stanly County Solid Waste Ordinance attached)

1. Civil Penalty: Any person who is found in violation of this ordinance and has been given thirty (30) days notice by citation issued by the County of Stanly shall be subject to a civil penalty not to exceed Fifty and NO/100 Dollars (\$50.00) and each day's continuing violation shall be treated as a separate and distinct offense.

The Stanly County Solid Waste Department, Department of Environmental Health, Planning & Zoning Department, Sheriff's Office, Magistrate's Office, N.C. Department of Transportation and the N.C. Solid Waste Section have all cooperated at times to respond to incidents of illegal dumping in Stanly County.

The importance of proper disposal of solid wastes is a part of all educational programs presented by the solid waste director. The director responds to reports of illegal dumping of solid wastes in the unincorporated areas. Reports are confirmed and contact made with the responsible parties. A copy of the local ordinance and the state rules are given if necessary. A certain level of compliance has been obtained with these efforts.

The municipality itself handles reports of illegal dumping activity within corporate limits of the municipalities. The solid waste director if needed provides assistance. This is usually in the form of information.

The problem of illegal dumping/promiscuous dumping/littering in the county has to be addressed first by looking at why the problems exist. There are multiple reasons and therefore more than one way to prevent and/or respond. Several departments within county government are in a position to assist in prevention and enforcement of illegal dumping. Procedures will be put in place to use our existing resources to combat this problem to the degree possible. An example of this would be for a person receiving a building permit to be given information on the solid waste management requirements.

As was stated earlier, the solid waste director can obtain a certain level of compliance under the existing program of response. Further development of this program will include identification of the steps, which will be taken if the solid waste director's attempts fail to solve the problem. A step-by-step policy needs to be in place which begins at the point a complaint is received or a problem discovered, and goes, in a worse case scenario, all the way through charges being filed.

In addition to the policy for the enforcement of the ordinance, educational efforts should focus on these issues. A number of citizens will cooperate when they fully understand why and how, while a certain percentage requires a different approach. Cooperation will be required in the educational effort as in the enforcement area.

Some illegal disposal, especially of bulky items, is connected to the operation of the convenience centers. The centers are not equipped for acceptance of all items generated by the unincorporated homeowner. Bulky items, white goods, construction and demolition debris etc. must be delivered to the City of Albemarle Landfill. The operating hours of the centers are

not entirely uniform throughout the nine sites and some citizens complain that the schedule is confusing. There is also some confusion as to who is authorized to use the sites, which is, in part, related to the fee based method used to fund the system. These concerns will be considered as we address these issues in depth.

Expansion and possible relocation of one of Stanly County's Convenience Centers will be considered when funds permit. This site can be designed and equipped to accept bulky items, construction/demolition debris, white goods and tires. Consideration can also be given to incorporating a more permanent household hazardous waste collection program and the pesticide container-recycling program into the operation. Doing this would allow the public to see how much better the sites could be and perhaps lessen the negative response to an increase in the annual solid waste fee.

Litter Management

Litter is a problem in Stanly County as it is across North Carolina and beyond. The local ordinance has provisions related to littering, as do other state laws.

The director heads the Keep Stanly Beautiful Committee, a local committee of volunteers recognized by the Board of Commissioners and dedicated to finding solutions to this problem.

The Keep Stanly Beautiful Committee and the Stanly County Solid Waste Dept. has and will continue to support The Big Sweep program promoted by the Morrow Mountain State Park. Stanly County has participated in this annual waterway cleanup for many years and participation continues to grow.

The Keep Stanly Beautiful Committee has purchased a large amount of Trash Cups to distribute to the Drivers Education Program here in Stanly County. These containers are to be given to each new driver to carry in his/her car to dispose of their trash. We hope that this will keep fast food trash in the car not on the highway.

Litter law booklets were printed for use by all law enforcement agencies in the county. The laws were strengthened prior to distribution of all the booklets so they will be reprinted or corrected. Flyers were designed and printed for use as handouts at the convenience centers to educate users on the importance of tarping or covering loads. The scale house attendants at the City of Albemarle Landfill printed a similar flyer for use.

Stanly County is addressing this issue along with illegal and promiscuous dumping using the method described previously. The Keep Stanly Beautiful Committee, chaired by the solid waste director, will take the lead. A cooperative approach will be used to combat litter from multiple directions. Education will be a large part of the effort. Listed below are actions, which will be a part of the comprehensive program, developed for litter prevention and abatement.

- The Adopt-A-Highway program will be promoted. The Keep Stanly Beautiful Committee will set an example and adopt a very visible section.
- The Swat-A-Litterbug program will be extensively promoted.
- The City of Albemarle's Adopt-A-Street program has been promoted.
- Participation will continue in the Big Sweep annual cleanup. Expansion of this will be an objective as Stanly County has extensive shoreline.

- Litter prevention will be a continued focus of all education efforts in the schools. A more intensive focus will be possible with the publication of the "Trash Talk" newsletter quarterly.
- The county will work with the City of Albemarle, owners and operators of the area landfill, to encourage stricter enforcement of the "tarping requirements" and other rules related to containment of solid wastes as they are transported along Stanly County roads.
- The county will work with local law enforcement agencies to encourage enforcement of the state's litter statutes and the local solid waste ordinance.
- The county will work with all municipalities to assist them in developing anti-litter education programs for their citizens as well as enforcement programs.
- The Dept. of Transportation & the Dept. of Correction will be encouraged to expand the use of prison labor from the Albemarle Correctional Facility to keep the roads in Stanly County clean.
- Public awareness/education efforts will continue and be more consistent. Letters to the Editor are planned along with poster contests in the schools that focus on the "Don't Be A Litterbug" theme.
- Area automobile dealerships will be asked to place litterbags in all vehicles sold. We can include educational material in the bags.
- Fast food restaurants will be asked to help in any way possible to discourage littering by their customers.

D. Purchase of Recycled Materials and Products

Stanly County adopted a Resolution Supporting Waste Reduction, Recycling and Buy-Recycled Efforts within County Government Operations.

The Resolution directs Stanly County employees to:

1. Seek to reduce waste at the source. i.e.: Waste prevention tactics such as two-sided copying when practicable or choosing reusable mugs over disposable cups
2. Recycle all materials for which an internal program exists.
3. Cooperate with efforts to reduce waste and increase recycling by type and volume of material.
4. Purchase products for county use which contain recycled materials giving preference to those products with higher levels of post-consumer recycled content whenever such products meet minimum standards for their particular function and so long as the cost of the products made from recycled materials does not exceed the cost of similar products made from virgin materials. Life-cycle costs shall be considered for durable goods.

The "Buy-Recycled" component of a comprehensive waste management program has been included in all education efforts directed toward the business, industrial and institutional sector of the county. The importance of this activity is also covered in programs given to civic groups and school children. It seems to be a component of recycling that must be pointed out.

The local community college and the county schools are required by legislation and executive order to purchase recycled products equal to a percentage of the total dollar value of paper products purchased. They must report annually to Division of Pollution Prevention and

Environmental Assistance. These percentages increase each fiscal year. Recycled content paper is the only paper now offered on state contract. The local school system has implemented a program for the recycling of toner cartridges and the purchase of recycled toner cartridges. The governmental units can learn more about this and implement similar programs.

The county will renew its effort to make sure recycled materials and products are purchased "in-house". This will include durable goods, which are often overlooked. Buying recycled products will continue to be addressed as a part of all education efforts and promoted as a part of the recycling circle.

E. Disaster Response/Debris Management

Stanly County has considerable experience in the management of debris from natural disasters. We have had tornados, extensive damage from Hurricane Hugo, Hurricane Fran and Hurricane Floyd and most recently, we have experienced hailstorms and flooding. The County of Stanly, Republic Services LLC and Asplundh are working closely together to remove any debris in its proper manner.

Staging areas for delivery of debris are located according to need. These are normally located on large vacant parcels of land that are easily assessable to equipment and the public. Two Stanly County Convenience Centers were used as collection areas for debris following the last tornado. Open top collection containers were placed on site and their availability advertised in the newspaper and on the local radio channels.

A contractor that comes to the City of Albemarle Landfill facility when enough material has been accumulated grinds the materials into mulch. Contract grinding will also take place at locations other than the landfill if necessary. Efforts are made to track materials, tonnage and cost so that reimbursement from FEMA can be accomplished efficiently.

The Stanly County Emergency Management Director is heavily involved in these debris management projects and coordinates the county's effort. He works as a liaison with FEMA. He has attended a Debris Management Course through the Emergency management Institute and will be developing an actual "Debris Management Plan" for the county.

The County's Solid Waste Director gets involved in debris management when needed and when the convenience centers are needed as collection points. Representatives of the municipalities get involved when areas under their jurisdiction are affected. The City of Albemarle Landfill facility and management are heavily involved in all efforts of this type due to the contract grinding arrangement on site.

F. Stanly County Abandoned Manufactured Home Program

Reference To the Abandoned Manufactured Home Program will be found in APPENDIX F. Stanly County Solid Waste Ordinance Section X. Abandon Manufactured Home Planning Initiative

Part VII. SOLID WASTE COSTS AND FINANCING METHODS

Description and Assessment of Costs:

County Description:

Stanly County operates a collection system for household garbage and recyclables through the nine convenience centers serving the unincorporated resident. The hauling of garbage and recyclables collected is contracted to a private hauler. Disposal of garbage is at the City of Albemarle Landfill. The solid waste costs shown below are for the county-operated program.

The total cost for the county-operated solid waste program during FY 2010-11 was \$706,821. The budget is divided into three sections: Administration, Collection and Disposal.

The Administrative Budget includes the solid waste supervisor's salary, benefits, travel, training, postage, supplies etc. not related to collection or disposal.

The Collection Budget includes the operating cost of the nine convenience centers, salaries for the eighteen attendants, all supplies for the centers, contract hauling costs and program costs related to waste reduction and recycling.

The Disposal Budget includes the cost of disposal of the garbage collected. It also includes revenues and expenses for the scrap tire program and for the white goods program, but these have been excluded since the programs are operated by the City of Albemarle and operating funds received from the state are transferred to the City. The payment made to the contractor for the Household Hazardous Waste Collection Day Event is included here, but has been excluded in the table below to allow for a clearer picture of the cost per ton for collection and disposal of garbage.

Stanly County managed 6,802 tons of waste and 569 tons of recyclable materials in 10-11. Summaries of the county-operated solid waste program costs are shown in Table 13.

Table 13. County-operated Solid Waste Program Costs, FY 10-11

	COLLECTION	DISPOSAL	RECYCLING	TOTAL
PROGRAM COST	\$450,566	\$238,049	\$18,206	\$706,821
COST PER TON	\$57.75	\$35	\$32	\$124.75

Source: Stanly County Solid Waste Department and Finance Department Records

City of Albemarle Description:

The City of Albemarle contracts with Waste Management for curbside collection. Curbside collection of garbage, yard waste, large household items such as furniture and white goods and recyclables is provided weekly for city residents. The collection of leaves is provided citywide on a seasonal basis. The city has approximately 6,292 households that disposed of an

estimated 6,676 tons of garbage 1,227 tons of yard waste in FY10-11. The City of Albemarle solid waste program costs, excluding leaf collection, are summarized in Table 14.

Table 14. City of Albemarle Solid Waste Program Costs, FY10-11

	COLLECTION and DISPOSAL	NO RECYCLING	Mulching
PROGRAM COST	\$1,422,613		Included in collection
COST PER TON	\$180.30		
COST PER HOUSEHOLD			

Source: City of Albemarle Annual Report

The chart above shows collection and disposal cost associated with weekly curbside pickup of garbage and yard waste along with disposal of each. Examining cost of various programs provided by the City of Albemarle is complicated by the fact that some figures include cost of services, which are provided for the county as a whole. A system will be developed for record keeping which will simplify the process. The solid waste director will work with Albemarle and other municipalities on this. As of July 1, 2003 the City of Albemarle no longer has a recycling program.

Town of Badin Description:

The Town of Badin's citizens are served by a convenience center located within the town's corporate limits, which is owned and operated by Stanly County. Garbage and recyclables are accepted at the convenience center. The Town of Badin is treated as an unincorporated area under the county's solid waste fee system used to support the convenience center program. Each household that elects not to contract with the private hauler for garbage pickup service is assessed the annual solid waste fee by the county.

City of Locust Description

The City of Locust serves an estimated 1100 households with garbage collection and disposal services through a contract with a private hauler. The total cost for FY 2010-11 was \$186,894 Tonnage was listed at 1,207. This comes to \$148.72 per ton.

Town of New London Description

The Town of New London has 238 households. Garbage collection and disposal is provided through a contract with a private hauler. The total cost for FY 2010-11 was \$35,575. Tonnage was listed at 264. This comes to \$134.00 per ton. The town now has curbside recycling FY 2011-12 they recycled 2.32 tons. FY 2011-12 Garbage disposal was 27,303 tons. (5/2012)

Town of Norwood

The Town of Norwood contracts with a private hauler for most of the garbage collection and disposal services provided to its citizens. An estimated 1184 households are served. Tonnage disposed in FY 2010-11 was 9,000. Mulching 28 tons. Total cost of garbage collection/disposal for the Town of Norwood FY 10-11 was \$165,626 that comes to \$139.89 per ton.

Town of Oakboro Description

The Town of Oakboro has an estimated 819 households. Estimated annual tonnage of garbage is 642 tons. Total program cost for FY 2010-11 was \$128,057. This comes to \$199.00 per ton. Garbage collection and disposal is provided through a contract with a private hauler. The Town of Oakboro offers Bi-weekly recycling curbside service by offering customers a 94 gallon roll out cart. (6/2012)

Town of Richfield Description

The Town of Richfield contracts for garbage collection and disposal services with a private hauler. The town has approximately 155 households and estimates the tonnage disposed for FY 2010-11 at 211 tons. The total cost of the program was \$23,473. This comes to \$151.44 per household.

Town of Stanfield Description

The Town of Stanfield has an estimated 397 households and estimates the tonnage of garbage disposed for FY 2010-11 at 389 tons. The total cost of the solid waste collection/disposal contract was \$51,000. No cost given for tons or household.

Town of Red Cross Description

The Town of Red Cross has an estimated 318 households and estimates the tonnage of garbage disposed for FY 2010-11 at 162 tons. The total cost of the solid waste collection/disposal contract was \$43,000. No cost given for tons.

Village of Misenheimer Description

The Village of Misenheimer has an estimated 130 households and estimates the tonnage of garbage disposed for FY 2010-11 at 144 tons. The total cost of the solid waste collection/disposal contract was \$27,783 comes to \$178.00 per ton.

Description of Financing Methods:

The current solid waste program operated by the county is funded by an annual solid waste fee assessed on each habitable dwelling in the unincorporated area not served by a private waste hauler. Badin area households are also assessed the fee. In some years, revenue from grants has been used to funds specific projects. Although very small, any funds received from the sale of recyclable material are also credited to the solid waste budget. A small portion of the cost of the county's solid waste program has been subsidized by the general fund both as direct and indirect cost.

The City of Albemarle operates the scrap tire program and the white goods program. The tire program is partially funded through the tire tax levied by the state. The white goods tax distribution supports the white goods and metals recycling program.

The City of Albemarle charges its residents a \$12.45 per month collection and disposal fee, which is included on the utility bills. (5/2012) The balance of their program cost is funded through property taxes. See Table 15 for a summary of current financing methods.

Table 15. Solid Waste Financing Methods Used By the Planning Area

	Total SWM Budget FY 07-08	Tire fee	Property Taxes - General Fund	Household Charge	Volume or Weight-based fees	Sale of Recyclables	Grants	Tire & White Good Tax	Other
Stanly County	\$706,821	%	8%	92%	%	%	Varies	%	%
Albemarle	\$1,126,050	%	%	See	Below	%	%	%	%
Badin	\$	%	%	100%	%	%	%	%	%
Locust	\$ 129,507	%	100%	%	%	%	%	%	%
New London	\$35,575	%	100%	%	%	%	%	%	%
Norwood	\$165,625	%	100%	%	%	%	%	%	%
Oakboro	\$128,567	%	%	%	%	%	%	%	%
Richfield	\$no cost given	%	100%	%	%	%	%	%	%
Stanfield	\$51,000	%	100%	%	%	%	%	%	%
Red Cross	\$43,000	%	100%	%	%	%	%	%	%
Misenheimer	\$27,783	%	100%	%	%	%	%	%	%

Source: County and Municipal Staff plus Solid Waste Management Annual Reports

Assessment of County Financing Methods: In the county program, when the annual solid waste fee became effective, the administrative costs, as defined previously, were funded with general fund revenues. The solid waste fee funded the collection and disposal budgets. Using this method, the fee as it is presently set, normally covers the operating cost of the program.

It is apparent that other sources of revenue will be needed to expand solid waste programs. Raising the solid waste fee is difficult, as is raising property taxes. An equitable funding method for support of programs, which benefit only certain segments of the population, needs to be sought if expansion into these areas is to be realized. Many local governments run solid waste programs with landfill tip fees. Stanly County does not have this option.

The City of Albemarle has a per household charge which covers the collection and disposal of the garbage collected from their residents. General fund revenues fund a portion of the residential programs. The City of Albemarle Landfills operates as enterprise funds and disposal fees are approved by City ordinance. (5/2012)

The Town of Oakboro has implemented a monthly surcharge on the water and sewer bills to fund a portion of the waste reduction/recycling programs.

Other municipalities plan to continue with their existing methods of finance, which are almost exclusively property tax funds.

Part VIII. FACILITIES AND RESOURCES AVAILABLE THROUGH PRIVATE ENTERPRISE

The Stanly County planning area considered the use of privately operated facilities and resources in developing this plan. Most municipal solid waste disposal is provided through the City of Albemarle Landfill, a public enterprise. Excluding the county operated drop-off program, waste collection is operated privately. Recycling is operated both by the public and private sector. Stanly County uses a combination of publicly and privately operated programs.

APPENDIX A.

Stanly County Solid Waste Planning Committee

1. Jerry Morton, solid waste director for Stanly County, serves as committee chair and as Stanly County representative.
2. Michael E. Lambert, Public Works Director, represents the City of Albemarle.
3. Jay Almond, town manager for Badin, represents the Town of Badin.
4. Tim Flieger, Director of Public Works, represents the City of Locust.
5. Susan Almond, Town Clerk, represents the Town of New London.
6. Dwight Smith, Town Administrator represents the Town of Norwood.
7. Ross Holshouser, Town Administrator represents the Town of Oakboro.
8. Carolyn Capps, Town Clerk represents the Town of Richfield.
9. Wanda Yow, Town Clerk, represents the Town of Stanfield.
10. Aloma Whitley, Town Clerk, represents the Town of Red Cross.
11. Pam Humphrey, Town Clerk, represents the Village of Misenheimer.
12. Stanly County Environmental Affairs Board Members:
Dale Burris, Chairman, serves as an industry representative.
Frank Lee, Vice-Chairman represents agriculture
Mark McCarter serves as an industry representative.
Larry Baucom serves as a municipal representative.
Lisa Myers serves as an industry representative.
Carrie Cox serves as education.
Steven Megson serves as At-Large
Conrad Carter serves as At-Large
Mark Dry serves as At-Large

Ex-officio Members:

Dennis Joyner, Health Director
Steve Lemons, Agriculture Extension Agent
Jerry Morton, Solid Waste Director
Brian Simpson, Emergency Management Director

APPENDIX B.

COUNTY OF STANLY

1000 NORTH FIRST STREET, SUITE 10
ALBEMARLE, NORTH CAROLINA
28001



STANLY COUNTY

RESOLUTION TO APPROVE THE STANLY COUNTY SOLID WASTE PLAN.

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

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

WHEREAS, Stanly County was adequately represented on the Stanly County Planning Committee for the 3-year comprehensive solid waste management plan and has been actively involved in the planning process;

NOW, THEREFORE, BE IT RESOLVED that the County Commissioners of Stanly County hereby approve the Stanly County Comprehensive Solid Waste Management Plan Update.

Adopted by the Board of Commissioners during regular session on this 4 day of June 2012

Chairman
Stanly County Board of Commissioners

Clerk to the Board

Resolution 12-18
CITY OF ALBEMARLE

RESOLUTION TO APPROVE THE STANLY COUNTY SOLID WASTE PLAN.

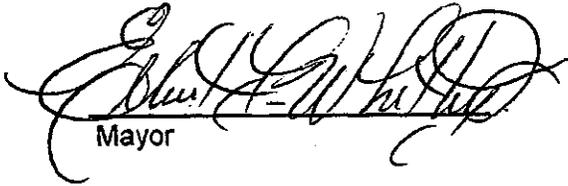
WHEREAS, better planning for solid waste will help protect public health and the environment, provide for an improved solid waste management system, better utilize our natural resources, control the cost of solid waste management; and,

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

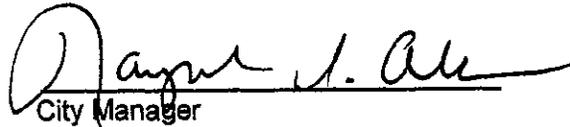
WHEREAS, the City of Albemarle was represented on the Stanly County Planning Committee for the 3-year solid waste management plan and has been actively involved in the planning process;

NOW, THEREFORE, BE IT RESOLVED that the City Council of Albemarle hereby approves the Stanly County Comprehensive Solid Waste Management Plan.

Adopted this 4th day of June, 2012.



Mayor



City Manager

TOWN OF BADIN

RESOLUTION TO APPROVE THE STANLY COUNTY SOLID WASTE PLAN.

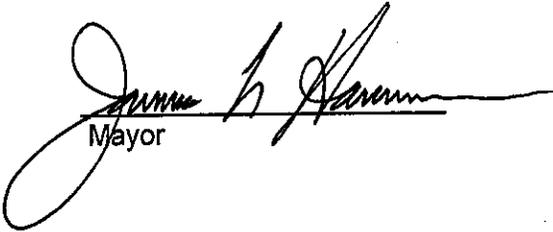
WHEREAS, better planning for solid waste will help protect public health and the environment, provide for an improved solid waste management system, better utilize our natural resources, control the cost of solid waste management; and,

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

WHEREAS, the Town of Badin was represented on the Stanly County Planning Committee for the 3-year comprehensive solid waste management plan and has been actively involved in the planning process;

NOW, THEREFORE, BE IT RESOLVED that the Town of Badin hereby approves the Stanly County Comprehensive Solid Waste Management Plan.

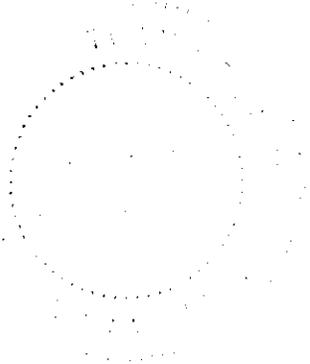
Adopted this 12th day of June, 2012.



Mayor



Town Manager





City of Locust
Post Office Box 190
Locust, North Carolina 28097-0190
(704) 888-5260

CITY OF LOCUST

RESOLUTION TO APPROVE THE STANLY COUNTY SOLID WASTE PLAN.

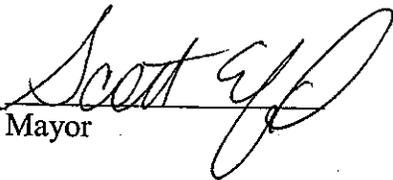
WHEREAS, better planning for solid waste will help protect public health and the environment, provide for an improved solid waste management system, better utilize our natural resources, control the cost of solid waste management; and,

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

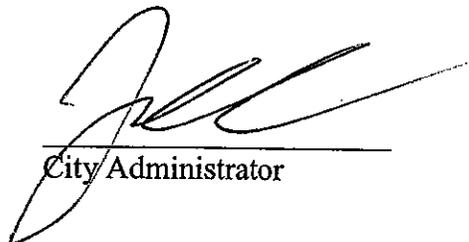
WHEREAS, the City of Locust was represented on the Stanly County Planning Committee for the 3-year comprehensive solid waste management plan and has been actively involved in the planning process;

NOW, THEREFORE, BE IT RESOLVED that the City of Locust hereby approves the Stanly County Comprehensive Solid Waste Management Plan.

Adopted this 5th day of April, 2012.



Mayor



City Administrator

TOWN OF NEW LONDON

RESOLUTION TO APPROVE THE STANLY COUNTY SOLID WASTE PLAN.

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

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

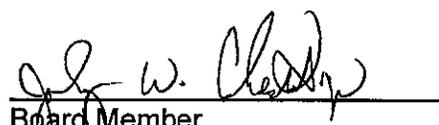
WHEREAS, the Town of New London was represented on the Stanly County Planning Committee for the 3-year comprehensive solid waste management plan and has been actively involved in the planning process;

NOW, THEREFORE, BE IT RESOLVED that the Town of New London hereby approves the Stanly County Comprehensive Solid Waste Management Plan.

Adopted this 1 day of May, 2012.



Mayor



Board Member

TOWN OF NORWOOD

RESOLUTION TO APPROVE THE STANLY COUNTY SOLID WASTE PLAN.

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

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

WHEREAS, the Town of Norwood was represented on the Stanly County Planning Committee for the 3-year comprehensive solid waste management plan and has been actively involved in the planning process;

NOW, THEREFORE, BE IT RESOLVED that the Town of Norwood hereby approves the Stanly County Comprehensive Solid Waste Management Plan.

Adopted this 7th day of MAY, 2012.

Nancy M. Becker
Mayor

Laurel Smith
Administrator

TOWN OF OAKBORO

RESOLUTION TO APPROVE THE STANLY COUNTY SOLID WASTE PLAN.

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

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

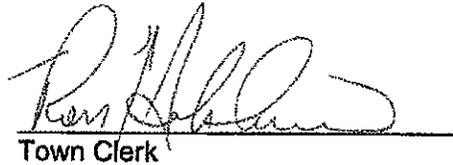
WHEREAS, the Town of Oakboro was represented on the Stanly County Planning Committee for the 3-year comprehensive solid waste management plan and,

NOW, THEREFORE, BE IT RESOLVED that the Town of Oakboro hereby approves the Stanly County Comprehensive Solid Waste Management Plan.

Adopted this 26th day of JUNE, 2012.



Mayor



Town Clerk

TOWN OF RICHFIELD

RESOLUTION TO APPROVE THE STANLY COUNTY SOLID WASTE PLAN.

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

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

WHEREAS, the Town of Richfield was represented on the Stanly County Planning Committee for the 3-year comprehensive solid waste management plan and,

NOW, THEREFORE, BE IT RESOLVED that the Town of Richfield hereby approves the Stanly County Comprehensive Solid Waste Management Plan.

Adopted this 21st day of May, 2012.

James P. Michalunas
Mayor

Carolyn Capps
Town Clerk

TOWN OF STANFIELD

RESOLUTION TO APPROVE THE STANLY COUNTY SOLID WASTE PLAN.

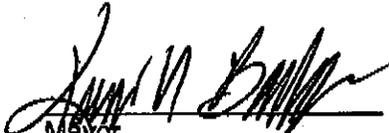
WHEREAS, better planning for solid waste will help protect public health and the environment, provide for an improved solid waste management system, better utilize our natural resources, control the cost of solid waste management; and,

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

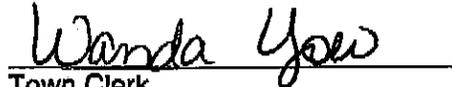
WHEREAS, the Town of Stanfield was represented on the Stanly County Planning Committee for the 3-year comprehensive solid waste management plan and,

NOW, THEREFORE, BE IT RESOLVED that the Town of Stanfield hereby approves the Stanly County Comprehensive Solid Waste Management Plan.

Adopted this 5th day of April, 2012.



Mayor



Town Clerk

TOWN OF RED CROSS

RESOLUTION TO APPROVE THE STANLY COUNTY SOLID WASTE PLAN.

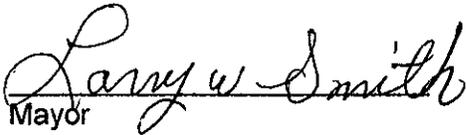
WHEREAS, better planning for solid waste will help protect public health and the environment, provide for an improved solid waste management system, better utilize our natural resources, control the cost of solid waste management; and,

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

WHEREAS, the Town of Red Cross was represented on the Stanly County Planning Committee for the 3-year comprehensive solid waste management plan and has been actively involved in the planning process;

NOW, THEREFORE, BE IT RESOLVED that the Town of Red Cross hereby approves the Stanly County Comprehensive Solid Waste Management Plan.

Adopted this 14th day of MAY, 2012.



Mayor



Board Member

VILLAGE OF MISENHEIMER

RESOLUTION TO APPROVE THE STANLY COUNTY SOLID WASTE PLAN.

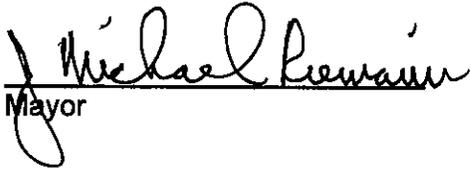
WHEREAS, better planning for solid waste will help protect public health and the environment, provide for an improved solid waste management system, better utilize our natural resources, control the cost of solid waste management; and,

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

WHEREAS, the Village of Misenheimer was represented on the Stanly County Planning Committee for the 3-year comprehensive solid waste management plan and has been actively involved in the planning process;

NOW, THEREFORE, BE IT RESOLVED that the Village of Misenheimer hereby approves the Stanly County Comprehensive Solid Waste Management Plan.

Adopted this 14TH day of MAY, 2012.


Mayor


Board Member

Appendix C.

Emergency Operations Plan Disaster Recovery



Stanly County Emergency Services

201 South Second Street
Albemarle, North Carolina 28001
(704) 986-3650
Fax: (704) 986-3653



To: All Interested Parties
From: Brian Simpson
Director, Emergency Services
Ref: Emergency Operations Plan
Date: January 14, 2009

The intent of this memorandum is to inform any interested party, that Stanly County Emergency Service now has their Emergency Operations Plan on-line. We purchased this software in 2006 through EPlan, LLC. As large as this document is, it better suited our needs in the arena of Disaster Management. Anyone interested in viewing our plan, you may visit: www.stanlynceop.com

Username: Stanly

Password: Guest

Should you have any further questions, please feel free to contact our office. (704)986-3650

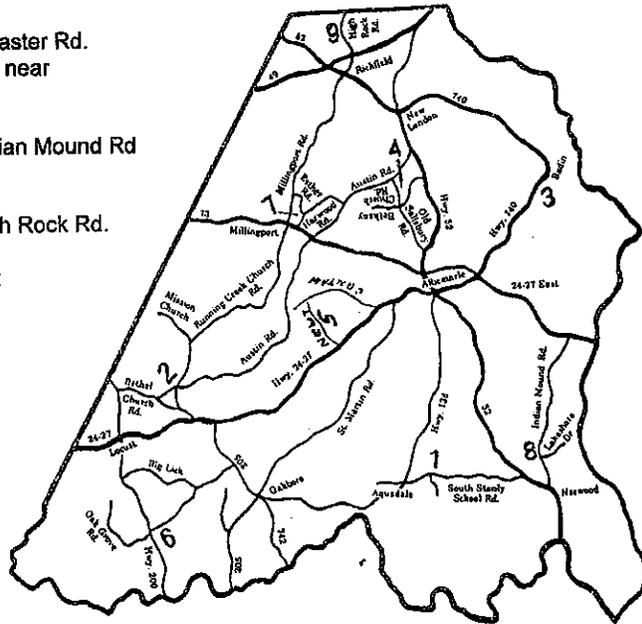
Appendix D.

Map to all of Stanly County Disposal Sites

Where Can We Take Our Recyclables?

There are convenience centers located throughout Stanly County for collection of garbage and recyclables.

- 474-5341 1. **Aquadale Site:** South Stanly School Rd. behind Aquadale Elementary School & Stanly Fixtures
- 485-8743 2. **Austin Road Site:** On Austin Rd., near Bethel Church Park, ½ mile from Austin Rd. intersection with Bethel Church Rd.
- 422-5018 3. **Badin Site:** South-west of Alcoa on Hwy 740.
- 982-4713 4. **Bethany Site:** Bethany Church Rd. near Britthaven Nursing Home.
- 982-2645 5. **Newt Rd. Site:** Below the Agri-Center on the right Newt Rd.
- 888-3620 6. **Corner Store Site:** Corner of Hwy. 200 and Oak Grove Rd., South of Stanfield.
- 982-4573 7. **Millingport Site:** Easter Rd. off of Harwood Rd. near Millingport School
- 474-3469 8. **Norwood Site:** Indian Mound Rd at Lakeshore Dr.
- 463-5404 9. **Richfield Site:** High Rock Rd. North of Hwy 49 behind old Perfect Fit Industries.



APPENDIX E.

Planning Elements

**PLANNING ELEMENTS
 NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN**

Circle appropriate element

PLANNING YEARS 20__ through 20__

- | | | | | |
|---|-------------------|--------------------------------|----------------------------------|---|
| <i>Reduction</i> | <i>Collection</i> | <i>Recycling & Reuse</i> | <i>Composting & Mulching</i> | <i>Incineration (with / without energy recovery)</i> |
| <i>Transfer outside geographic area</i> | | <i>Illegal Disposal/Litter</i> | <i>Disposal</i> | <i>Education with community & through schools</i> |
| <i>Special Waste</i> | | | | <i>Purchasing Recycled Products</i> |
| | | | | <i>Disaster Response</i> |

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 th YEAR
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> No action purposed at this time </div>					

**PLANNING ELEMENTS
NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN**

Circle appropriate element:

PLANNING YEARS 20__ through 20__

Reduction *Collection* *Recycling & Reuse* *Composting & Mulching* *Incineration (with / without energy recovery)*
Transfer outside geographic area *Illegal Disposal/Litter* *Disposal* *Education with community & through schools*
Special Waste *Purchasing Recycled Products* *Disaster Response*

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">Oil collection and un-crushed oil filters has been expanded to all 9 collection sites</div> <div style="border: 1px solid black; padding: 5px;">Solid Waste Fee</div>			<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">Stanly County & City of Albemarle supports a Household Hazard Waste 1 day event</div> <div style="border: 1px solid black; padding: 5px;">Fee collected thru Stanly Co. tax collectors</div>		

**PLANNING ELEMENTS
NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN**

Circle appropriate element

PLANNING YEARS 20__ through 20__

Reduction *Collection* *Recycling & Reuse* *Composting & Mulching* *Incineration (with / without energy recovery)*
Transfer outside geographic area *Disposal* *Education with community & through schools*
Special Waste *Illegal Disposal/Litter* *Purchasing Recycled Products* *Disaster Response*

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<p>All programs will continue as before</p>			<p>1 SW site will take white goods</p>		

PLANNING ELEMENTS
NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN

Circle appropriate element

PLANNING YEARS 20__through 20__

Reduction *Collection* *Recycling & Reuse* *Composting & Mulching* *Incineration (with / without energy recovery)*
Transfer outside geographic area *Disposal* *Education with community & through schools*
Special Waste *Illegal Disposal/Litter* *Purchasing Recycled Products* *Disaster Response*

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<div style="border: 1px solid black; padding: 5px; margin: 10px;"> Revise and strengthen the S.W. ordinance to discourage illegal dumping </div>			<div style="border: 1px solid black; padding: 5px; margin: 10px;"> Notice if Warning Notice of Violation </div>		

PLANNING ELEMENTS
NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN

Circle appropriate element

PLANNING YEARS 20__ through 20__

Reduction *Collection* *Recycling & Reuse* *Composting & Mulching* *Incineration (with / without energy recovery)*
Transfer outside geographic area *Special Waste* *Illegal Disposal/Litter* *Disposal* *Education with community & through schools*
Purchasing Recycled Products *Disaster Response*

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<div data-bbox="183 901 422 1336" style="border: 1px solid black; padding: 5px;"> <p>The county collection sites do not handle composting or mulching</p> </div>			<div data-bbox="893 922 1125 1232" style="border: 1px solid black; padding: 5px;"> <p>The City of Albemarle, Oakboro and Norwood have their own mulch program</p> </div>		

**PLANNING ELEMENTS
NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN**

Circle appropriate element

PLANNING YEARS 20__through 20__

Reduction *Collection* *Recycling & Reuse* *Composting & Mulching* *Incineration (with / without energy recovery)*
Transfer outside geographic area *Disposal* *Education with community & through schools*
Special Waste *Illegal Disposal/Litter* *Purchasing Recycled Products* *Disaster Response*

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<div style="border: 1px solid black; padding: 5px;"> All 9- collection sites collect household garbage and recyclables </div>			<div style="border: 1px solid black; height: 100px; width: 100%;"></div>		

**PLANNING ELEMENTS
 NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN**

Circle appropriate element

PLANNING YEARS 20__through 20__

Reduction *Collection* *Recycling & Reuse* *Composting & Mulching* *Incineration (with / without energy recovery)*
Transfer outside geographic area *Disposal* *Education with community & through schools*
Special Waste *Illegal Disposal/Litter* *Purchasing Recycled Products* *Disaster Response*

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<div style="border: 1px solid black; padding: 10px; width: fit-content;"> <p>No actions proposed at this time</p> </div>					

**PLANNING ELEMENTS
NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN**

Circle appropriate element

PLANNING YEARS 20__through 20__

Reduction *Collection* *Recycling & Reuse* *Composting & Mulching* *Incineration (with / without energy recovery)*
Transfer outside geographic area *Disposal* *Education with community & through schools*
Special Waste *Illegal Disposal/Litter* *Purchasing Recycled Products* *Disaster Response*

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<div style="border: 1px solid black; padding: 5px;"> Keep Stanly Beautiful Committee </div>			<div style="border: 1px solid black; padding: 5px;"> Trash Talk newsletter for the 3rd, 4th & 5th grades Grants for recycling with school system </div>		

**PLANNING ELEMENTS
NC LOCAL GOVERNMENT 10 YEAR SOLID WASTE MANAGEMENT PLAN**

Circle appropriate element

PLANNING YEARS 20__ through 20__

Reduction *Collection* *Recycling & Reuse* *Composting & Mulching* *Incineration (with / without energy recovery)*
Transfer outside geographic area *Disposal* *Education with community & through schools*
Special Waste *Illegal Disposal/Litter* *Purchasing Recycled Products* *Disaster Response*

COMPLETED ACTIONS	INCOMPLETE ACTIONS		NEW / REVISED ACTIONS		
KEY ACTIONS	KEY ACTIONS	WHY INCOMPLETE?	KEY ACTIONS	DATE DUE	ESTIMATED TONS DIVERTED IN 10 TH YEAR
<p>Implement a buy recycled policy for all of the Solid Waste Projects</p>			<p>All education materials are printed on recycle material</p>		

APPENDIX F.

Solid Waste Ordinance

ORDINANCE GOVERNING THE MANAGEMENT OF SOLID WASTE IN STANLY COUNTY, NORTH CAROLINA

The Board of County Commissioners, having considered the necessity of the adoption of an ordinance regulating the storage, collection, transportation, disposal, and management of solid waste in Stanly County, North Carolina, and having found that such an ordinance is in the best interest of the general welfare, health and safety of the people of Stanly County, does hereby enact the following ordinance.

Section I. Purpose and Statutory Authority

The purpose of this ordinance is to regulate the storage, collection, and disposal of solid waste in the unincorporated areas of Stanly County. This ordinance is adopted pursuant to the authority contained in G.S. 153A-121 to 123, -132.1, -136, -274 through -278, and -291 through -293, and 130A-309.09, -309.09A, -309.09B, and -309.09D. Unless otherwise indicated, the ordinance applies to both publicly owned and privately owned municipal solid waste management facilities located in Stanly County.

Section II. Definitions

The following definitions apply in the interpretation and enforcement of this ordinance:

1. Board or Board of Commissioners: The Board of Commissioners of Stanly County, North Carolina.
2. Bulky Waste: Large items of solid waste such as household appliances, furniture, automobiles, large auto parts, trees, branches, stumps, and other oversize wastes whose large size precludes or complicates their handling by normal solid waste collection, processing or disposal methods.
3. Collection: The act of removing solid waste (or materials that have been separated for the purpose of recycling) to a transfer station, processing facility, or disposal facility.
4. Commercial Solid Waste: All types of solid waste generated by stores, offices, restaurants, warehouses, and other non-

manufacturing activities, excluding residential and industrial waste.

5. Compost: Dark, friable, partially decomposed form of organic matter similar in nature to the organic matter in the soil. Compost is suitable for use as a soil conditioner with varying nutrient values.
6. Composting: Process in which aerobic microorganisms decompose “active” organic materials into a more stable form.
7. Construction and Demolition Waste: Solid waste resulting solely from construction, remodeling, repair, or demolition operations on buildings, other structures, but does not include inert debris, land-clearing debris, yard debris, used asphalt, asphalt mixed with dirt, sand, gravel, rock, concrete, or similar nonhazardous material.
8. Convenience Centers: Facilities owned, leased, rented or otherwise operated by Stanly County at which refuse, garbage, other solid waste or recyclables are collected, transported or disposed of. These centers are fenced and are attended by County employees under set operational schedules for the disposal of solid waste or acceptable recyclables from authorized households within Stanly County.
9. Department: The Department of Environment, Health and Natural Resources.
10. Disposal: The discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land so that the solid waste or any constituent part of the solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.
11. Garbage: All putrescible waste, including animal offal and carcasses, and recognizable industrial by-products, but excluding sewage and human waste.
12. Hazardous Wastes: Solid waste, or combination of solid wastes, which because of its quantity, concentration or physical, chemical or infectious characteristics may: (a) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

13. Incineration: The process of burning solid, semi-solid or gaseous combustible wastes to an inoffensive gas and residue containing little or no combustible materials.
14. Industrial Solid Waste: Solid waste generated by industrial processes or manufacturing that is not hazardous waste regulated under Subtitle C of RCRA.
15. Inert Debris: Solid waste that consists solely of material that is virtually inert and that is likely to retain its physical and chemical structure under expected conditions of disposal such as brick, concrete, rock and clean soil.
16. Institutional Solid Waste: Solid waste generated by educational, health care, correctional, and other institutional facilities.
17. Land-clearing Debris: Solid Waste that is generated solely from land-clearing activities such as stumps, trees, etc.
18. Landfill: A disposal facility or part of a disposal facility where waste is placed in or on land and that is not a land treatment facility, a surface impoundment, an injection well, a hazardous waste long-term storage facility or a surface storage facility.
19. Medical Wastes: Any solid waste that is generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals, but does not include any hazardous waste, radioactive waste, household waste as defined in 40 C.F.R § 261.4 (b) (1), or those substances excluded from the definition of “solid waste” in this ordinance.
20. Municipal Solid Waste: Solid waste resulting from the operation of residential, commercial, industrial, governmental, or institutional establishments that would normally be collected, processed, and disposed of through a public or private solid waste management service. Municipal solid waste does not include hazardous waste, sludge, or solid waste from mining or agricultural operations.
21. Municipal Solid Waste Management Facility: Any publicly or privately-owned solid waste management facility permitted by the Department that receives municipal solid waste for processing, treatment, or disposal.

22. Open Burning: The combustion of solid waste without: (a) control of combustion air to maintain adequate temperature for efficient combustion (b) containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion; and (c) control of the emission of the combustion products.
23. Open Dump: A solid waste disposal site that does not have a permit and /or does not comply with the rules set forth in this ordinance.
24. Pathological Waste: Human tissues, organs, and body parts, and the carcasses and body parts of any animals that were known to have been exposed to pathogens that are potentially dangerous to humans during research, were used in the production of biologicals or in in vivo testing of pharmaceuticals, or that died with a known or suspected disease transmissible to humans.
25. Person: An individual, corporation, company, association, partnership, unit of local government, state agency, federal agency or other legal entity.
26. Putrescible: Solid waste capable of being decomposed by micro-organisms with sufficient rapidity as to cause nuisances from odors and gases, such as kitchen wastes, offal and animal carcasses.
27. Processing: Any technique designed to change the physical, chemical, or biological character or composition of any solid waste so as to render it safe for transport; amenable to recovery, storage, or recycling; safe for disposal; or reduced in volume or concentration.
28. Radioactive Waste: Waste containing any material, whether solid, liquid, or gas, that emits ionizing radiation spontaneously.
29. Recycling: The process by which solid waste or recovered materials are collected, separated, or processed, and reused or returned to use in the form of raw materials or products.
30. Refuse: Solid waste, other than garbage or ashes, from residences, commercial establishments, and institutions.
31. Regulated Medical Waste: Blood and body fluids in individual containers in volumes greater than 20 ml.,

microbiological waste, and pathological waste that has not been treated pursuant to rules promulgated by the Department.

32. Resource Recovery: The process of obtaining material or energy resources from discarded solid waste which no longer has any useful life in its present form and preparing such solid waste for recycling.
33. Sanitary Landfill: A facility for disposal of solid waste on land in a sanitary manner in accordance with the rules concerning sanitary landfills adopted under N.C. Gen. Stat. 130A, Article 9.
34. Scrap Tire: A tire that is no longer suitable for its original, intended purpose because of wear, damage, or defect.
35. Septage: Solid waste that is a fluid mixture of untreated and partially treated sewage solids, liquids, and sludge of human or domestic origin that is removed from a septic tank system.
36. Sharps: Needles, syringes, and scalpel blades.
37. Sludge: Any solid, semisolid or liquid waste generated from a municipal, commercial, institutional, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect.
38. Solid Waste: Any hazardous or non-hazardous garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant or air pollution control facility, domestic sewage and sludges generated by the treatment thereof in sanitary sewage collection, treatment and disposal systems, and other material that is either discarded or is being accumulated, stored or treated prior to being discarded, or has served its original intended use and is generally discarded, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, institutional, commercial, and agricultural operations, and from community activities. The term does not include:
 - (1) Fecal waste from fowls and animals other than humans;
 - (2) Solid or dissolved material in

- a. Domestic sewage and sludges generated by treatment thereof in sanitary sewage collection, treatment, and disposal systems that are designed to discharge effluents to the surface waters;
 - b. Irrigation return flows; and
 - c. Wastewater discharges and the sludges incidental to and generated by treatment which are point sources subject to permits granted under Section 402 of the Water Pollution Control Act, as amended (P.L. 92-500), and permits granted under G.S. 143-215.1 by the Environmental Management Commission. However, any sludges that meet the criteria for hazardous waste under RCRA shall also be a solid waste for purposes of this definition;
- (3) Oils and other liquid hydrocarbons controlled under Article 21A of Chapter 143 of the General Statutes. However, any oils or other liquid hydrocarbons that meet the criteria for hazardous waste under RCRA shall also be a solid waste for the purposes of this definition;
 - (4) Any source, special nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. § 2011);
 - (5) Mining refuse covered by the North Carolina Mining Act, G.S. 74-46 through 74-68 and regulated by the North Carolina Mining Commission. However, any specific mining waste that meets the criteria for hazardous waste under RCRA shall also be a solid waste for the purposes of this definition.
- 39. Solid Waste Collector: Any person who collects and transports solid waste.
 - 40. Solid Waste Disposal Site: Any place at which solid wastes are disposed of by incineration, sanitary landfill or other approved method.
 - 41. Solid Waste Fee: An annual fee assessed on each habitable unincorporated residential household not served individually by a private waste hauler for collection and disposal of solid

wastes. Other releases of the fee, if any, are made by the solid waste supervisor based on criteria approved by the Board of Commissioners. The fee is determined by the Board of Commissioners on an annual basis based on the cost of operation of the staffed convenience centers. The fee is billed with the ad valorem taxes and is payable at the same time and in the same manner as property taxes. Payment of the fee is required for use of the centers for solid waste disposal.

42. Solid Waste Director: The duly designated director of county solid waste management.
43. Solid Waste Enforcement Officer: The duly designated enforcement officer of the county solid waste ordinance so authorized to enforce the provision of this ordinance and other such solid waste ordinances, regulations and laws as such person may be granted authority to enforce; the term *Solid Waste Enforcement Officer* shall include any duly trained and sworn Deputy Sheriff of the Stanly County Sheriff's Office working under the authority of the Stanly County Sheriff and any other person authorized by the Stanly County Board of Commissioners or the Stanly County Manager to enforce the provision of this ordinance.
44. Solid Waste Generation: The act or process of producing solid waste.
45. Solid Waste Management: Purposeful, systematic control of the generation, storage, collection, transport, separation, treatment, processing, recycling, recovery and disposal of solid waste.
46. Solid Waste Receptacle: Container used for the temporary storage of solid waste while awaiting collection.
47. Source Separation: Setting aside recyclable materials at their point of generation by the generator.
48. Special Wastes: Solid wastes that can require special handling and management including, but not limited to, white goods, whole tires, used oil, lead-acid batteries, and medical wastes.
49. Storage: The containment of solid waste, either on a temporary basis or for a period of years, in a manner which does not constitute disposal.

50. Tire: A continuous solid or pneumatic rubber covering encircling the wheel of a motor vehicle as defined in G.S. 20-4.01(23).
51. Transfer Station: A site at which solid waste is concentrated for transport to a processing facility or disposal site. A transfer station may be fixed or mobile.
52. Unit of Local Government: A county, city, town or incorporated village.
53. Used Oil: Any oil that has been refined from crude oil or synthetic oil and, as a result of use, storage, or handling, has become unsuitable for its original purpose.
54. White Goods: Inoperative and discarded refrigerators, ranges, water heaters, freezers, and other similar domestic and commercial large appliances.
55. Yard Waste: Solid waste consisting solely of vegetative matter resulting from landscaping maintenance, such as leaves, grass, limbs, trimmings, etc.

56. Abandoned Manufactured Home

A manufactured home that is not being occupied as a dwelling and does not provide complete, independent living facilities for one (1) family, including permanent provisions for living, sleeping, eating cooking, and sanitation: or

A manufactured home that has not received the proper permits to be located within the County's jurisdiction: or

A manufactured or mobile home that is a health or safety hazard as a result of the attraction of insects or rodents, conditions creating a fire hazard, dangerous condition constituting a threat to children, or frequent use by vagrants as living quarters in the absence of sanitary facilities: or

Any structure which is a manufactured or mobile home that was designated and intended for residential or other uses, which has been vacant or not in active use, regardless of purpose or reason, for a two (2) year period and has been deemed as nuisance due to safety or general welfare.

57. Demolition Contractor

A company or individual that performs the service of deconstruction, removal, and/or recycling of a structure or scrap debris.

Section III: General Conditions

- (a) All solid waste management in Stanly County shall be in accordance and in compliance with “Solid Waste Management Rules” as set forth by the North Carolina Department of Environment, Health and Natural Resources, Solid Waste Management Division, Solid Waste Section.
- (b) All solid wastes shall be stored, collected, transported, treated and processed, reclaimed, recycled and disposed of in a manner consistent with the requirements and in the interest of this ordinance.
- (c) This ordinance shall not be construed to obstruct recycling, composting of organic matter from households or other resource recovery processes.
- (d) The disposal of solid waste generated outside the boundaries of Stanly County at Stanly County Convenience Centers is prohibited.
- (e) All solid waste generated in Stanly County which is to be collected at the County Convenience Centers, by municipal or private contract collectors and transported over the public roads, highways and streets of Stanly County to ultimate disposal shall conform to these regulations.

Section IV: Storage and Disposal

- (a) No owner, occupant, tenant, or lessee of any property may deposit, store, or permit to accumulate any solid wastes upon his property that is not stored or disposed of in a manner prescribed by this ordinance.
- (b) The owner, occupant, tenant, or lessee of any property shall be responsible for the storage, collection and disposal of solid waste and shall remove or cause to be removed all solid wastes from his property at least once a week. The owner, occupant, tenant or lessee of property shall ensure that his waste is disposed of at a site or facility that is permitted to receive the waste.
- (c) Garbage shall be stored only in a container that is durable, rust resistant, nonabsorbent, water tight, and easily cleaned, with a

close-fitting, fly-tight cover in place. Each container shall be kept clean so that no odor or other nuisance condition exists.

- (d) Refuse shall be stored in a manner that will resist harborage to rodents and vermin and will not create a fire hazard.
- (e) No owner, occupant, tenant, or lessee of any building or dwelling may leave outside the building or dwelling, in a place accessible to children, any abandoned or unattended icebox, refrigerator or other receptacle that has an airtight door without first removing the door.
- (f) Solid waste shall be disposed of only in one of the following ways:
 - 1. In a landfill permitted by the Department.
 - 2. In an incinerator that has all required local, state, and federal operational and air pollution control permits.
 - 3. By any other method, including reclamation and recycling processes, that has been approved by the Department.
- (g) In addition to the methods listed in Section IV. (f), above, authorized persons may dispose of solid waste at convenience centers operated by the County in accordance with rules established by the County.
- (h) No person may discard, dispose, leave, or dump any solid waste on or along any street or highway or on public or private property unless such solid waste is placed in a receptacle or at a location designated for the deposit of solid waste.
- (i) Regulated medical waste, hazardous, and radioactive wastes shall be disposed of according to written procedures approved by the Department
- (j) Vehicles and containers used for the collection and transportation of solid waste shall be loaded and moved in such a manner that the contents will not fall, leak or spill, and when necessary, shall be secured and/or covered to prevent the blowing of material. If spillage or leakage should occur, the material shall be recovered immediately by the driver, and returned to the vehicle or container, and the area properly cleaned.

- (k) All sharps, whether broken or unbroken, shall be placed in a sealed, puncture-proof container prior to disposal. Container shall be properly identified as to the contents thereof.
- (l) Open burning of solid waste is prohibited.
- (m) Open dumping of solid waste is prohibited.
- (n) If any object of refuse is discovered upon any lands or waters, in any of the areas of Stanly County covered by this ordinance, other than an approved sanitary landfill or other proper receptacle, and said refuse bears the name, address or other means of identification of a person or persons, the person(s) so identified shall be presumed to have disposed of said refuse in violation of this Ordinance.

Section V.

Solid Waste Convenience Centers

- (a) Solid waste receptacles are maintained at convenience centers located throughout the County for use by authorized County residents, and authorized nonresident Stanly County property owners. Authorized users are those households which are assessed the annual solid waste fee and who are not delinquent in payment. Solid wastes may be disposed at convenience centers only in accordance with the provisions of this ordinance. Entry into convenience centers or disposal of solid wastes at convenience centers, except during authorized business hours, is prohibited.
- (b) Solid wastes shall be deposited inside the solid waste receptacle. No solid waste may be left at the convenience center outside the receptacle except at the direction of the attendant on duty.
- (c) Acceptable recyclable materials shall be placed in the designated containers labeled for that specific item. No person shall deposit in such containers any garbage, waste or other matter except that which is specifically designated and authorized by label.
- (d) Commercial, industrial, and institutional solid wastes may not be disposed at County Convenience Centers. County Convenience Centers shall be used only by authorized private citizens for disposal of residential solid wastes. County

Convenience Centers shall not be used by persons engaged in the business of collecting solid waste for disposal.

- (e) No person, unless authorized by Stanly County, may remove any item from a solid waste container, climb on or into a container, or damage any container located at County Convenience Centers.

- (f) Materials Not Acceptable

No persons shall place in a solid waste container:

1. Aluminum Cans
2. Asbestos
3. Bulky Waste
4. Burning or smoldering materials, or any other materials that would create a fire hazard
5. Commercial, Industrial or Institutional Waste
6. Construction & Demolition
7. Dead animals or parts thereof
8. Hazardous Waste
9. Lead-Acid Batteries
10. Liquid Waste
11. Paint or paint products
12. Radioactive Waste
13. Regulated Medical Waste
14. Sharps not properly contained
15. Sludge's
16. Special Waste
17. Tires
18. White Goods
19. Yard Waste
20. Other materials as designated by Stanly County.

Section VI.

Licensing of Solid Waste Collectors

- A. No person may engage in business as a solid waste collector in the unincorporated areas of Stanly County except under a license issued by the County pursuant to this ordinance.
- B. Any applicant granted a license pursuant to this ordinance shall maintain an office with sufficient staff to enable licensee to provide an adequate level of customer service including the dispatching of service vehicles and timely response to complaints.

- C. Any applicant granted a license pursuant to this ordinance that hauls waste generated in Stanly County in excess of 10,000 tons per year shall, at its expense, provide Stanly County a performance bond in the amount of \$50,000 in favor of County guaranteeing its conformance with this ordinance, which bond shall be subject to the approval of County as to form and security.
- D. A license fee of \$250.00 must accompany all applications for a solid waste collector's license.

E. Applications for licenses to engage in the business of solid waste collector shall be filed with the Solid Waste Director on forms provided by the Solid Waste Director. The applicant shall furnish the following information:

- (1) Name and address of the applicant and whether a sole proprietorship, corporation, or partnership, with disclosure of the ownership interests;
- (2) A list of the equipment possessed, available, or to be obtained by the applicant, including motor vehicle license tag numbers;
- (3) Minimum number of employees the applicant will use in the business;
- (4) Experience of the applicant in solid waste collection;
- (5) Balance sheet or equivalent financial statement as of the close of the applicant's last business year, showing the net worth of the business;
- (6) Planned routes and areas of the county the applicant shall serve;
- (7) Schedule of fees the applicant shall charge;
- (8) List which provides name, mailing and physical address and type of service provided for existing residential customers, if any;
- (9) Evidence of liability insurance coverage;
- (10) Name and location of the facility where collected waste is to be disposed.

- F. Before issuing a license pursuant to this section, the Solid Waste – Director shall inspect or cause to be inspected all facilities and equipment the applicant plans to use in the solid waste collection business.
- G. (1) The Solid Waste Director may issue the applicant a license only when he/she finds that the applicant's facilities and equipment are in good working order and that vehicles, equipment and employees are in sufficient number to allow applicant to provide adequate service to his customer base. Proposed operating methods must be found in compliance with this ordinance and applicable rules set by the Department. It must be found that the applicant will perform solid waste collection in an efficient and sanitary manner. A condition of the license shall be that the licensee shall serve every person who contracts with him for solid waste collection in such a manner that the licensee does not cause the person to be in violation of this ordinance.
- (2) If the Solid Waste Director denies an applicant a license, the applicant may request a hearing before the County Manager. The County Manager shall keep summary minutes of the hearing and at least one week after the hearing shall give the applicant written notice of his decision either granting the license or affirming his denial of the license. The applicant may appeal the County Manager's decision to the Board of County Commissioners by giving written notice of appeal to the County Manager within two days of receipt of the County Manager's decision following the hearing. After a hearing on the appeal, the Board shall either affirm the denial or direct the Solid Waste Supervisor to issue the license.
- (3) A solid waste collector's license shall be valid for a period of one year from the date of issuance. The license shall automatically renew for successive one-year periods upon receipt by the solid Waste Director for a letter of intent to renew from the license holder accompanied by an updated Certificate of Insurance. The solid Waste Director may, at any time, require documentation from a solid waste collector that the information given in the original application remains valid.

(4) A solid waste collector's license may be revoked by the Solid Waste Director for violations of this ordinance. The solid waste collector may request a hearing before the County Manager and appeal the decision. The procedure for this appeal and subsequent decisions by the manager shall be the same as for the denial of an original application for a license. See Section VI G. (2).

H. A licensee providing residential service shall submit a quarterly report to the Solid Waste Director containing the following information:

- (1) Number of customers added or deleted with a list that includes name, mailing and physical address and type of service provided;
- (2) Changes in routes;
- (3) New and replacement equipment;

(4) Any other information requested by the Solid Waste Director and pertinent to the solid waste collection business.

- I. (1) Vehicles and containers used for the collection and transportation of solid waste shall be covered, leak proof, durable, and easily cleaned. They shall be cleaned as often as necessary to prevent a nuisance and insect breeding and shall be maintained in good repair.
- (2) Vehicles and containers used for the collection and transportation of solid waste shall be loaded and moved in such a manner that the contents will not fall, leak, or spill, and shall be covered to prevent the blowing of material. If spillage or leakage should occur, the material shall be recovered immediately by the licensee and returned to the vehicle or container, and the area properly cleaned.

J. No license issued pursuant to this chapter shall be assignable.

Section VII. Administration and Enforcement.

The Stanly County Board of Commissioners authorizes the administration and enforcement of this ordinance. The administration and enforcement of this ordinance shall be vested with the County Manager, the Solid Waste Director, and any duly authorized Solid Waste Enforcement Officer and shall be administered in cooperation with the Environmental Health Division of the Stanly County Department of Public Health and the Stanly County Sheriff's Department.

Section VIII. Violations

The following solid waste management and disposal practices shall be unlawful and considered violations of this ordinance:

- (a) Maintaining, allowing, causing or permitting the accumulation of excessive, unsightly or improperly managed solid waste upon premises owned, occupied or controlled by the violator, in any manner placing or allowing solid waste to remain upon such premises so as to constitute a nuisance, or causing or creating the likelihood of injury to the health, welfare or safety of another person or the likelihood of injury to adjoining property;
- (b) Burning solid waste except as permitted by existing fire codes and regulations.
- (c) Intentionally or recklessly throwing, scattering, spilling, placing, causing or allowing to be blown, scattered, spilled, thrown or placed, or otherwise disposing of any litter upon any public property or private property not owned by said violator within Stanly County or into the waters of Stanly County including, but not limited to, upon any public highway, public park, lake, river, stream, campground, forest land, recreational area, mobile home park, highway, road, street or alley; the occurrence of any of the foregoing acts resulting from transporting solid waste in a vehicle shall constitute a violation.
- (d) Intentionally and willfully dumping or depositing any solid waste material on the property owned by the violator or the property of another with or without the consent of the property owner which is inconsistent with proper and lawful solid waste management and disposal practices.
- (e) Burying in the earth or submersing in water any solid waste material that is not permitted by proper and legal solid waste management and disposal regulations and practices.

Section IX. Permissible Methods of Disposal.

The following solid waste management and disposal practices shall be considered permissible and lawful with respect to this ordinance:

- (a) Disposal of solid waste in a sanitary landfill or other disposal facility duly authorized and permitted by the North Carolina Department of Environment and Natural Resources;
- (b) Disposal of solid waste in an approved incinerator or other heat treating device duly authorized and permitted by the North Carolina Department of Environment and Natural Resources;
- (c) Recycling of solid waste utilizing approved lawful practices and available resources and outlets for recycled materials.

Section X. Abandoned Manufactured Home Planning Initiative

PURPOSE:

To clarify responsibilities and procedures of the Stanly County Planning Department concerning abandoned/significantly damaged manufactured homes in Stanly County. This Standard Procedure is designed to fulfill the requirements of Article 9 of Chapter 130 A Part 2F. (Session Law 2008-136/House Bill1134) § 130A-309.99- § 130A-309.99H.

The intent of this ordinance is to improve the condition of properties within Stanly County and promote new development. Other interests may include the protection of property values, promotion of tourism, indirect protection of health and safety, community preservation, and/or stability of area residents.

This is a semi-voluntary program that is being offered to Stanly County residents or property owners with qualifying abandoned manufactured homes. It is **not** the intent of this ordinance to remove non-qualifying units. The County will fund the various components of this program with the exception of landfill fees.

The County may at any time conduct this program from a non-voluntary standpoint.

While the County Manager is identified as being the administrative person performing the various duties, he/she may also designate other individuals to act on behalf of the County.

PROCEDURE:

1. Determination of Violation: Determine if the manufactured home in question is located within the county's jurisdiction. If so, proceed in determining if the unit meets the criteria of an abandoned manufactured home as defined by Section II of the Solid Waste Ordinance.

Qualifications for abandoned manufactured homes include the following:

- 1) A manufactured home that is vacant or in need of extensive repair, **and**
- 2) Be an unreasonable danger to public health, safety, welfare, or the environment.

The contents of the ordinance and standard procedure shall be carried out by the County Manager or designee.

Definitions

Vacant – Not currently being lived in or have been lived in for the past 120 days.

In Need of Extensive Repair - Repair is defined as needed to bring the unit into compliance with the current building/electrical/mechanical/plumbing codes for manufactured homes. Extensive repair refers to repairs that exceed 50% of the structures value according to the County Tax Collector.

When considering whether or not the unit exhibits an unreasonable danger to public health, safety, welfare, or the environment, many aspects must be evaluated to make this determination. These aspects may include but are not limited to: age of the unit, habitation, exterior condition, interior condition, animal infestation, routine maintenance, existing rubbish, significant rusting of material, sharp protruding metal, building code violations, mold, safety, indoor plumbing, in-tact windows, roof condition, and safe entry into and out of the unit.

2. Upon evaluating the property for a qualifying unit, a Notice of Violation will be issued to the property owner and allowed 7 days for delivery via certified mail with return receipt. A formal written response must be presented by the property owner to the County within 30 days of the owner receiving the Notice of Violation. With the confirmation of a qualifying unit, the County Manager/designee will obtain written permission from the property owner and/or unit owner to enter onto the property and carry out the means necessary to deconstruct the abandoned manufactured home. This unit must now be removed from the property within 90 days of confirming the qualifying unit and presenting the Notice of Violation. The property owner must be allowed an opportunity to have a hearing before a designated public officer. While County assistance is available on a limited basis, property owners are not required to use county funding to assist in the removal of qualifying units.

3. If the owner chooses to appeal the public officers' decision at the hearing, he/she must first appeal to the Planning Director. Appeal of the Planning Directors' decision may be made to Zoning Board of Adjustment. The Zoning Board of Adjustments' decision may be appealed thru the judicial system, but the judicial appeal only determines if proper procedure was followed. The Zoning Board of Adjustments' decision cannot be overturned by the court. The courts can only require the Zoning Board of Adjustment to re-hear the case based on proper procedure.
4. If property owners do not comply with removing qualifying units within the 90 days specified from confirming the qualifying unit and presenting the Notice of Violation, the County shall issue a Notice of Citation in the amount of \$100 per day and \$100 per day thereafter until the deconstruction process begins at the expense of the owner or until permission is given to the County to deconstruct the unit. Upon citations reaching an amount equivalent to the structural value of the unit, the County shall cease the issuance of citations and pursue an injunction thru the County judicial system. The County shall request a full reimbursement of expenses as it relates to administration and deconstruction costs incurred by this unit.
5. With written permission and a hold harmless agreement in hand, the County will publicly advertise deconstruction services to local contractors within the County. The County may advertise for more than one unit to be deconstructed at once to achieve better deconstruction rates per unit.
6. With liability insurance, qualifications, workers compensation, etc. provided by the contractors, the County Manager/designee will review the applicants and conduct a bid hearing to clarify the expectation of work to be performed as part of the deconstruction process. The lowest bid does not guarantee in any way that the contract will be awarded to any specific individual or corporation.
7. Upon awarding the deconstruction contract, the County Manager/designee and contractor will meet on the subject property to review how the work shall be conducted and how the final product should appear. The contractor will be made aware of conditions such as dates to work (M-F), working times (7am-6pm), "Trucks Entering Road" signs, construction entrance or tire wash station may be needed depending on seasonal weather conditions, etc.
8. Before deconstruction, the unit shall be evaluated for the presence of asbestos. If asbestos is present, a professional asbestos removal company shall provide the required services.
9. The contractor shall recycle any form of mercury switches from thermostats.
10. All other components that can be recycled shall be sorted accordingly and then transported to a designated landfill for recycling. This shall include frame, axle, wall studs, etc. White goods such as stove, refrigerator, and/or dishwasher shall be presented to the landfill as a white good.

11. Prior to the actual deconstruction, the County Manager/designee and contractor will physically walk the property and perform other measures as necessary to ensure that there are no persons inside the structure or close enough to be injured as a result of the deconstruction.
12. From when deconstruction begins, the contractor shall complete all work on the site within 5 business days. The property will be left graded and free of junk and unwanted debris.

The deconstruction contractor shall provide all landfill receipts to the County Manager/designee as it must be presented to NCDENR for program reimbursements.

Section XI. Enforcement Measures and Remedies.

Stanly County may exercise remedies for violation of any provision of this ordinance as allowed and authorized by the North Carolina General Statutes § 153A-123 as follows:

1. **Civil Penalty:** Any person who is found in violation of this ordinance and has been given thirty (30) days notice by citation issued by the County of Stanly shall be subject to a civil penalty not to exceed Fifty and No/100 Dollars (\$50.00) and each day's continuing violation shall be treated as a separate and distinct offense.

2. **Equitable Remedy.** The County may enforce a violation of this ordinance by an appropriate equitable remedy issuing from a court of competent jurisdiction to issue an order that may be appropriate.

3. **Injunction and abatement.** In addition to the above remedies the County may enforce a violation of this ordinance by application to the appropriate division of the General Court of Justice for a mandatory or prohibitory injunction and order of abatement commanding the defendant to correct the unlawful condition upon or cease the unlawful use of the property. The action shall be governed in all respects by the laws and rules governing civil proceedings, including the Rules of Civil Procedure in general and Rule 65 in particular. The order of abatement may be entered by the Court as a part of the judgment in the cause in accordance with the provisions of North Carolina General Statute Sec. 153A-123 (e).

A citation may be issued to any person if there is probable cause to believe that such person has violated any provision of this ordinance. Citations so issued may be served upon the violator in person by the Solid Waste Enforcement Director/Officer or mailed to the person by certified mail if the person cannot be readily found. Any citation so served or mailed shall direct the violator to make payment of the fine on or before a specified day and hour to the Stanly County Tax Collector and to present evidence of the remedy of any violation of this ordinance to the Solid Waste Enforcement Director/Officer within a period of not less than seventy-two (72) hours after service or delivery to the violator. If served by certified mail, the violator shall have six (6) days after the return receipt date to respond to the citation.

If the violator does not respond to the citation, the Solid Waste Enforcement Director shall forthwith have a complaint entered against such person.

A warning may be issued by the Solid Waste Enforcement Director/Officer without fine when the officer is of the opinion that a violation of this ordinance may be remedied without the necessity of enforcement; however, a warning citation may not be issued in the case where public health and/or safety are endangered.

A citation may be issued for multiple violations and the violator assessed the sum of the penalties for each offense. All enforcement actions as by law permitted shall be used to collect fees/fines.

All fines/fees collected for violations shall be transferred to the appropriate account by the County Finance Office with first priority being given to a special account created to offset the cost of the County in cleaning up illegal trash on properties held by indigent persons such as the handicapped and/or the elderly.

Section XII. Severability.

If any Section, subsection, sentence, phrase or portion of this ordinance is for any reason invalid or unconstitutional as determined by a Court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance.

Section XIII. Effective Date.

This ordinance shall become effective upon adoption.

This restated ordinance shall become effective on the 29 day of June 2009.

BY: *Tony M. Dennis*
CHAIRMAN

ATTEST:

Debra L. Brubaker
CLERK TO THE BOARD

APPENDIX G.

DISPOSAL RECOMMENDATION FOR NORTH CAROLINA TURKEY & POULTRY FARMS (BIRD FLU)

**District Conservationist
Recommended use of web site
www.PandemicFlu.gov
From USDA-NRCS**



AVIAN INFLUENZA

Public Health Considerations in the Application of Measures to Contain and Control Highly Pathogenic Avian Influenza (HPAI) Outbreaks in Poultry

World Health Organization Regional Office for the Western Pacific
Manila Philippines
26 April 2004

Introduction

A sustained, widespread highly pathogenic avian influenza (HPAI) epidemic, especially due to H5N1 infection in poultry, is a significant public health hazard as it increases the risk of a human influenza pandemic. Spread of the infection and human risk are especially great and hard to manage where poultry are raised in village/backyard farms, and where there is significant live poultry movement through farms and markets. The best method to prevent or limit the impact of HPAI outbreaks on public health is to promptly contain and control these outbreaks in poultry, conduct efficient surveillance and reporting of potentially infected poultry flocks, and implement biosecurity measures that reduce human exposure to potentially infective birds, bird debris such as litter, feather dust and husbandry equipment. These considerations are intended to direct careful attention to safeguarding public health in relation to the application of containment and control measures for HPAI outbreaks in poultry.

Key Points

1. HPAI viruses, especially H5N1, can cause severe disease and death in poultry and humans. Death in poultry can occur within 1-2 days of infection.
2. Humans get avian influenza virus infection through direct contact with bird faeces and respiratory secretions, droplets, and by mechanical transfer through contact with contaminated fomites (surfaces such as clothing, footwear, farm and transportation equipment, cages, tools, other materials and vehicles). Fomites are an important mechanism of HPAI virus transmission.
3. Depending on environmental conditions, AI viruses may remain infectious in manure, water, soil and on contaminated equipment for at least 35 days (Ausvetplan 2002) and perhaps as long as 3 months in colder climates.
4. Wild birds, especially waterfowl, can acquire HPAI infection without signs of clinical disease. They can initiate HPAI outbreaks in domestic poultry through contamination of their food and drinking water supplies (e.g. lakes).
5. AI viruses can infect and replicate in mammals. Widespread HPAI infections and prolonged circulation in the animal population may result in mutations and recombination that may increase the disease potential of the virus in humans.
6. AI viruses can contaminate eggs and poultry meat. Even dressed (frozen and/or commercially packaged) poultry can present a risk for infection to humans because HPAI viruses can survive in frozen carcasses and blood for as long as 3 weeks.
7. The prevention and control of HPAI epidemics in poultry, and thus potentially the reduction in human exposure risk to the virus, can be achieved through implementation of systematic surveillance for disease in poultry flocks (clinical and if possible laboratory diagnosis and reporting to appropriate animal health authorities), followed by rapid stamping out and application of comprehensive biosecurity measures.
8. AI viruses are orthomyxoviruses, influenza type A, that possess the following physical and chemical characteristics:

Temperature: Inactivated by 56 °C in 3 hours; 60 °C in 30 minutes
 PH: Inactivated by acid pH
 Chemicals: Inactivated by oxidizing agents, sodium dodecyl sulphate, lipid solvents, b-propiolactone
 Disinfectants: Inactivated by detergents, halogenated compounds (chlorine and iodine), quarternary ammonium salts, synthetic phenols, alkalis, formaldehyde and glutaraldehyde, and other products.
 Survival: Remains viable for long periods in tissues, faeces and water, but highly susceptible to disinfection

(Ref: Highly pathogenic avian influenza. <http://www.oie.int> Office International Epizooties 22 April 2002 ; and

HPAI outbreak detection and containment practices for affected poultry establishments and areas

A. General Principle

Avian influenza disease control and elimination is highly dependent on rapid and effective response activities. Speed is of the essence: the earlier the official intervention, the fewer the number of birds that will need to be killed. Any approach adopted must ensure complete elimination of the virus. Because of the professional training and competence required, veterinary authorities must be involved.

B. Identification of HPAI Disease in Poultry

In countries experiencing or likely to be experiencing an outbreak of HPAI in poultry, the empiric detection of an HPAI outbreak should be considered if there are reliable reports of any poultry establishment experiencing an unusually high mortality rate (e.g. >1% daily mortality for 2 days in commercial settings and >5% for village poultry farms) and where the mortality is associated with one or more of the following signs: depression and respiratory disease, swollen heads, cyanosis of the combs or wattles, and possibly neurologic signs and diarrhea. Animal health authority confirmation of these reports should be grounds for initiating AI containment measures in the affected poultry population.

In apparently HPAI-free zones and countries, appropriate laboratory diagnosis (e.g. through RT-PCR, hemagglutination inhibition assays, neutralization assays and agar gel precipitation tests, and/or viral isolations) may be necessary to unequivocally determine H5N1 avian influenza infection in suspect poultry flocks before initiation of AI stamping out measures.

In all circumstances, the concerned countries must decide rapidly (preferably within 24 hours), using sound scientific and epidemiologic evidence, whether to implement HPAI containment measures.

C. Containment of HPAI Outbreaks in Poultry Through Quarantine, Isolation and Stamping Out

The declaration and implementation of quarantine, isolation and stamping out measures should be undertaken in accordance to recommendations made by the Food and Agriculture Organization of the United Nations (FAO) and the Office International des Epizooties (OIE) in areas where HPAI outbreaks in poultry are confirmed.

1. Application of containment measures in protection zones where HPAI infected or potentially infected poultry are identified

A protection zone contains one or more infected and closely adjacent uninfected farms. The rationale for its declaration is to immediately contain the geographic spread of HPAI. Thus, it entails stamping out of all infected and potentially infected poultry flocks and restricting entry onto and exit from these farms and locations by people, materials, equipment, vehicles (cars, trucks, bicycles, etc.), and animals (livestock, pets, and vermin).

Specific protection zone measures may include the following:

- diligent securing or policing of HPAI contaminated farms (demarcation of farms) and the boundary of the protection zone (e.g. designating checkpoints);
- application of comprehensive decontamination measures on all poultry premises, farm equipment and vehicles within the protection zone;
- issuance and distribution of public advisories for protection zone and surrounding area residents, travellers or visitors with information on methods for HPAI infection prevention (refer to WHO advice for people living in an area affected by highly pathogenic avian influenza (HPAI) virus, 10 February 2004);
- assurance and verification by responsible authorities of compliance with stamping out and quarantine orders, including active monitoring for the absence of poultry (until repopulation is authorized), sanitary disposal of poultry carcasses and debris, and decontamination of farms or other locations where poultry were kept; and
- intensified monitoring and control near protection zone boundaries.

2. Quarantine measures applied in surveillance zones

Areas immediately surrounding protection zones are declared as surveillance zones. These zones are subject to quarantine measures even though there are no reports of HPAI infection in poultry within these zones. Strict biosecurity measures are implemented within and between establishments to make sure that poultry and birds are

kept isolated from other birds and animals, and strict movement restrictions (e.g. farms to markets) are in place.

Specific surveillance zone measures may include the following:

- implementation of heightened surveillance for poultry cases suspected of meeting the H5N1 case definition above;
- immediate implementation of protection zone containment measures if HPAI infection or potential infection is identified in the surveillance zone;
- enhanced biosecurity measures such as keeping poultry inside sheds or enclosures to prevent contact with wild birds and their excreta and keeping poultry and pigs separated and not housed in the same sheds or areas (pigs can serve as a vehicle for spreading re-assorted influenza viruses to people); and
- strict discouragement or control and monitoring of the movement of poultry (live or processed), eggs, farm materials, equipment, and vehicles within the surveillance zone. Movement of these items from the surveillance zone is strongly discouraged.

D. Culling of Poultry

Culling inside the protection zones must be diligently performed, considering the risk of infection to poultry in adjacent apparently HPAI free areas and the potential for H5N1 transmission to people. Culling must be done as close as possible to the centre of infection, for example, within the affected farm. When practicable, it is best to cull birds inside the poultry house or in containers just outside the poultry house. Moist disinfection of the house or container surfaces, poultry litter and debris can help reduce the spread of virus during and after the culling process. Under all circumstances, the culling procedure should be as humane as possible, without compromising human safety. The access of wild birds, vermin and other animals to the area where poultry are being culled and disposed of should be prevented as much as possible.

Carbon dioxide saturation is the method of choice for destroying poultry species when large numbers are involved. For a thorough description of culling methods, refer to the Manual on Procedures for Disease Eradication by Stamping Out (FAO, 2001) and the Report of the First Meeting of the OIE Ad Hoc Group on the Humane Killing of Animals for Disease Control Purposes, Paris, 14-16 October 2003.

Responsible authorities should ensure that all materials needed for culling are available in advance of the procedure, especially personal protective equipment (PPE) for the cullers. The supply of these materials should be adequate for the anticipated scale of the culling operation. The proper use of PPE is described in "WHO interim recommendations for the protection of persons involved in the mass slaughter of animals potentially infected with highly pathogenic avian influenza viruses".

The minimum number of people necessary to accomplish the culling should be involved. Designated cullers should be trained in safe and appropriate culling procedures and should work directly under the supervision of responsible persons/authorities. Designating trained sets of cullers, for example for each district, may allow for easier supervision. Untrained persons should not participate directly in the culling process. Every effort should be made to prevent inadvertent virus exposure by persons not protected during culling operations.

Cullers must be closely supported and supervised throughout the culling operation to facilitate their changing of goggles, taking rests/breaks, and proper degowning and decontamination. Individuals with knowledge of infection control and biosecurity should take responsibility for helping cullers safely remove/replace goggles, masks, and PPE when these become inoperative/soiled, and for scheduled rests/breaks. These individuals should also wear PPE but must not be involved in handling the animals. Additionally, they must oversee that all the safety precautions (stipulated in the WHO guidelines) are in place—making sure that complete and correct PPE is provided and properly used, transported from storage to culling site and back, disposed of or decontaminated, and stored for subsequent use.

Making portable showers and toilets accessible will further promote personal protection. Health and animal authorities will need to cooperate in coordinating the close monitoring of the health of cullers for a certain period following the operation (refer to WHO guidelines for the health monitoring of cullers).

E. Disposal of culled poultry, accumulated litter and other contaminated materials

The prompt and effective disposal of culled birds and contaminated materials that cannot be effectively disinfected (e.g. feeds, litter and eggs) is essential. Depending on local circumstances, burial may be the preferred method of disposal. Covering the buried carcasses with lime is a requirement since it protects the carcasses from being uncovered by animals and earthworms. Lime should not be placed directly on carcasses because in wet conditions it slows decomposition.

Although it is best to bury poultry and contaminated materials at the affected area or farm, this may not always be possible because of the local well-water table level or other environmental conditions. Therefore, a burial place away from the infected farm may be the best option, especially in situations where a number of farms are infected in a given area. In this case, a common and centrally located burial site may be most practical.

Under all circumstances, however, the transportation of culled birds and other contaminated materials must be done in covered leak-proof container-vehicles that can be disinfected after use. These containers and vehicles should never leave the contaminated area without first being thoroughly disinfected.

The disposal of litter can pose special problems as virus may be spread in dust. Therefore, it is necessary to moisten the surface of the litter with detergent or disinfectant solution before disturbing the pile prior to disposal.

Composting (thermal deactivation of the virus) of litter and other contaminated organic wastes is a recommended option that can best be undertaken in closed and vermin proof sheds on the affected farm. If sheds are not available, after spraying the material to be composted with detergent or disinfectant solution, push it into mounds away from any potential source of surface water and cover securely with black or dark plastic tarps. Composting should be done in a secure area not accessible by other animals such as rodents, cats, dogs or birds. To ensure inactivation of virus, the mounds should not be disturbed for at least 3 months (United States Department of Agriculture).

In general, open-air burning of carcasses and contaminated materials is not recommended. Open-air burning should not be practised because of the extended time it takes to achieve complete combustion of the carcasses and waste, and the inability to easily verify that all infective pathogens are destroyed in the resulting incomplete combustion process. If burning must be attempted as the only practical method of disposing of dead birds and contaminated materials, closed incineration should be practised. Incinerators should be well maintained by knowledgeable operators.

Refer to FAO's *Manual on Procedures for Disease Eradication by Stamping Out* for thorough description of disposal procedures. Before disposal work starts, personnel should be fully briefed. The nature of the disease and hygiene requirements associated with zoonotic diseases should be explained on site. It is crucial to select a site that is well protected from people and scavenging animals. On some occasions it may be necessary to mount a guard at the site for the first few days.

F. Decontamination and Disinfection

Strict adherence to decontamination and disinfection procedures is essential to the control of HPAI infection in affected areas. Refer to FAO's *Manual on Procedures for Disease Eradication by Stamping Out* for thorough description of decontamination and disinfection procedures.

Decontamination involves thorough cleaning and disinfection of the infected site to remove all contaminated material and sources of virus. Individuals should be trained to conduct the procedures.

Initial cleaning of organic matter from sheds, equipment, and vehicles by brushing and washing with detergent and water is an essential step before chemical disinfection. It is very important to recognize that influenza virus can be spread on clothing, footwear, poultry crates, feed sacks and egg fillers and these items must be disinfected, or destroyed, after each use. Paper or wood items cannot be effectively decontaminated, so they should be destroyed and buried.

All farm materials (e.g. feed containers, water buckets), tools, equipment, vehicles and the structures that are physically or functionally connected to the areas where infected poultry are located should be properly cleaned and disinfected.

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