

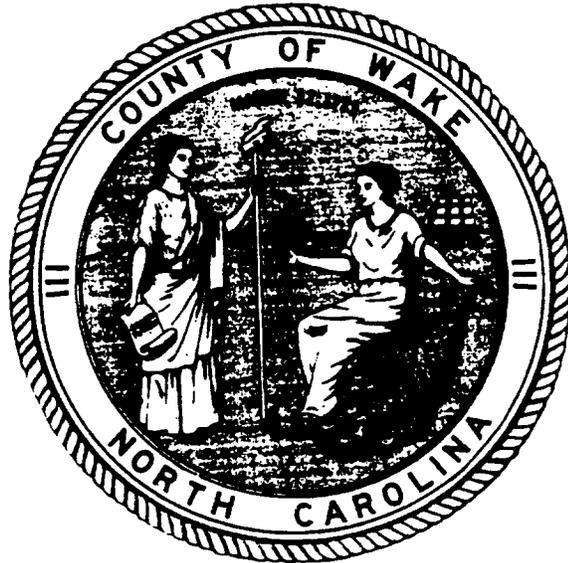
Report

*SWRP ~~Wake County, Wake County, North Carolina~~
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Wake County, North Carolina

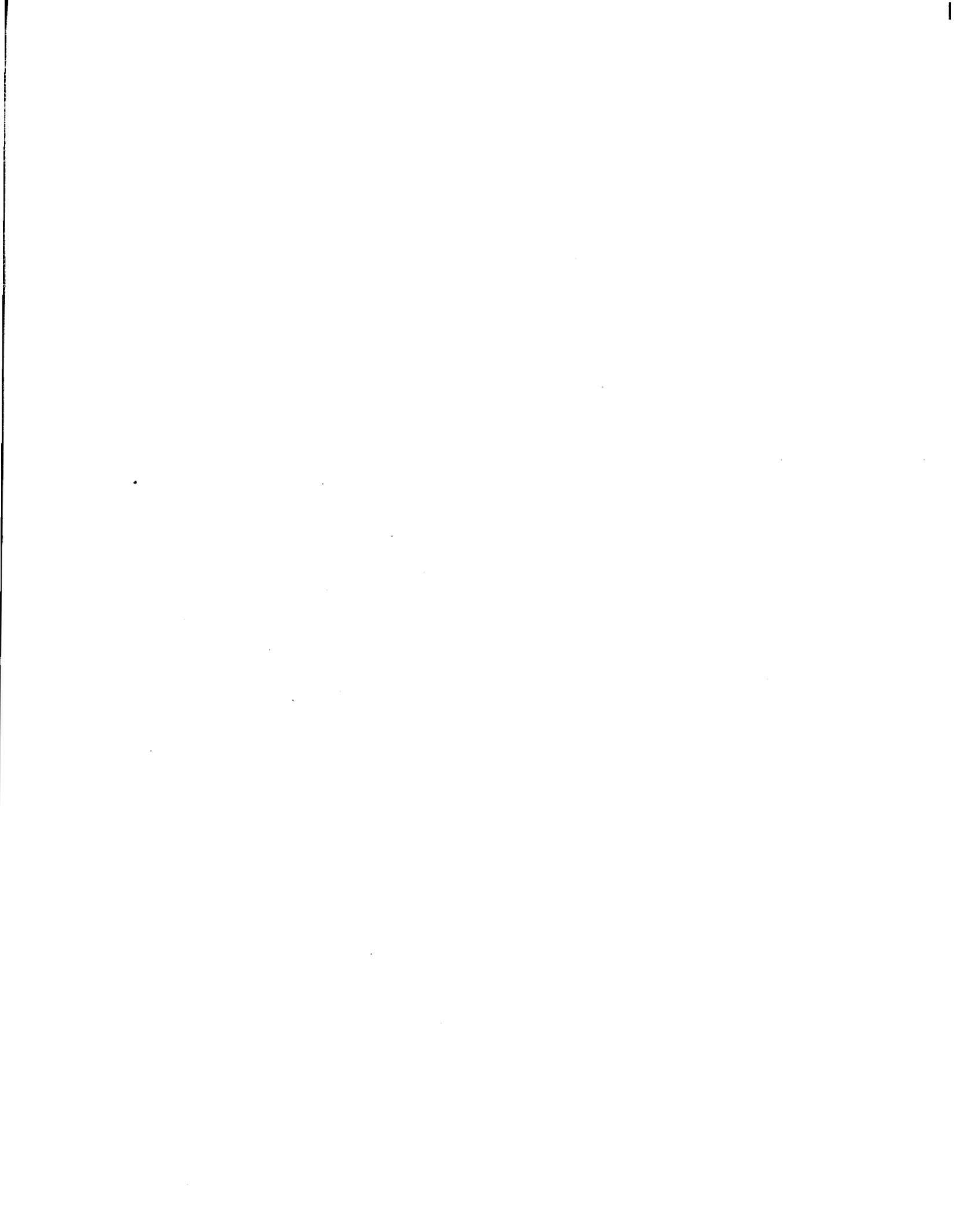
Solid Waste Management Plan
Submitted Pursuant to G.S. 130A-294(a)(5a) for
Designation of a Geographic Area

September 1993
Final Report



Prepared by:





**WAKE COUNTY
NORTH CAROLINA**



Commissioner:	Vernon Malone, Chairman
Commissioner:	Jack Nichols, Vice-Chairman
Commissioner:	J. Stewart Adcock
Commissioner:	Merrie R. Hedrick
Commissioner:	Abe Jones
Commissioner:	Gary Pendleton
Commissioner:	Betty Lou Ward
County Manager:	Richard Y. Stevens
Administrator, Community Development Services:	Douglas D. Longhini
Director, Solid Waste Management Division:	Joseph P. Carter

Solid Waste Management Plan



8-17-93

August 1993

CAMP DRESSER & McKEE
Raleigh, North Carolina

environmental engineers, scientists,
planners, & management consultants

CDM

Waste - Low Control

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary



September 17, 1993

Vernon Malone, Chairman
Wake County Board of Commissioners
Post Office Box 550
Raleigh, North Carolina 27602

Dear Chairman Malone:

The Solid Waste Management plan for Wake County is approved as provided for in GS 130-294 (a) (5a). The unincorporated area of Wake County is designated a geographic area for the management of solid waste and as provided for in GS 130A-294 (a) (5b) authorized to enact ordinances regarding the disposal of solid waste.

The approval of this plan does not constitute approval of a comprehensive plan as required by GS 130a-309.04. If you have questions or concerns regarding this matter please contact this office at 919 733-0692.

Sincerely,

Dexter R. Matthews
Section Chief

PC:sp

733-0612



COUNTY OF WAKE
RALEIGH, NORTH CAROLINA
September 7, 1993

Mr. William Meyer, Director
Division of Solid Waste Management
North Carolina Department of Environment,
Health and Natural Resources
Post Office Box 27687
Raleigh, North Carolina 27611-7687

Re: Solid Waste Management Plan for Wake County
· Request for Designated Geographic Area

Dear Mr. Meyer:

With the submittal of the attached Solid Waste Management Plan, the Wake County Board of Commissioners requests that all unincorporated areas of Wake County receive N.C. DEHNR approval as a "designated geographic area" as per North Carolina General Statutes 130A-294(a)(5a). The following Solid Waste Management Plan and the attached Resolution of Support passed by the Wake County Board of Commissioners are submitted in support of this request.

The area requested for designation through this Plan, is the unincorporated areas of Wake County. Upon receiving State approval, Wake County will be authorized should it so desire to enact a local solid waste ordinance that will provide that all solid waste generated, collected, transported, and stored within the approved designated geographic area will be managed and disposed in accordance with this Plan.

Pursuant to G.S., 130A-294(a)(5a), the Plan contains:

- the existing and projected population for the designated geographic area;
- the quantities of solid waste generated and estimated to be generated in the designated area;
- the method of solid waste disposal to be used to manage the solid waste generated in the designated area;
- information on the landfill disposal capacity available to the County;

RESOLUTION

RESOLUTION ADOPTING THE WAKE COUNTY
SOLID WASTE MANAGEMENT PLAN

WHEREAS, the North Carolina Department of Environment, Health, and Natural Resources (DEHNR), in accordance with NCGS 103A-294, has the authority to designate a geographic area within which the collection, transportation, storage and disposal of all solid waste shall be accomplished in accordance with a solid waste management plan; and

WHEREAS, Wake County has developed a solid waste management plan for the implementation of safe and sanitary practices of management of solid waste within the county; and

WHEREAS, Wake County desires to be designated as a geographic area in which its solid waste management plan may be implemented; and

WHEREAS, the Wake County Board of Commissioners wishes to adopt the Wake County Solid Waste Management Plan and thereby become a designated geographic area;

NOW, THEREFORE, BE IT RESOLVED that the Wake County Board of Commissioners hereby adopts the Wake County Solid Waste Management Plan; and

BE IT FURTHER RESOLVED that the Wake County Board of Commissioners does hereby request that the State of North Carolina approve Wake County as a designated geographic area in which its solid waste management plan may be implemented.

Commissioner Adcock made a motion that the above Resolution be adopted. Commissioner Ward seconded the motion. Upon vote the motion was passed unanimously this the 7th day of September, 1993.

Contents

<u>Section</u>		<u>Page</u>
1.0	Request for Approval	1-1
	1.1 Legislative Authority	1-1
	1.2 County Authority and Resolution	1-1
	1.3 Area Requested as Designated Geographic Area	1-2
2.0	Background	2-1
	2.1 Applicability	2-2
	2.2 Expansion of the Designated Geographic Area	2-3
	2.3 Plan Overview	2-3
3.0	Demographics	3-1
4.0	Solid Waste Quantities Generated	4-1
5.0	Current and Future Solid Waste Collection Practices	5-1
6.0	Current and Future Landfill Disposal Capacity	6-1
	6.1 Land Clearing and Inert Debris Landfills	6-1
	6.2 Construction and Demolition Landfills	6-2
	6.3 Sanitary Landfills	6-2
7.0	Environmental Impact of Continued Landfilling of Waste	7-1
	7.1 North Wake Landfill	7-2
	7.2 Feltonville Landfill	7-2
8.0	Current and Future Programs Designed to meet Solid Waste Management Act of 1989 Waste Reduction Goals	8-1
	8.1 Recycling and Waste Reduction	8-2
	8.2 Management of Materials Banned from Landfilling	8-3

Contents, continued

	page
9.0 Solid Waste Disposal Methods being Evaluated as Future Waste Management Options	9-1

APPENDICES

Appendix A	Designated Area: Apex
Appendix B	Designated Area: Cary
Appendix C	Designated Area: Fuquay-Varina
Appendix D	Designated Area: Garner
Appendix E	Designated Area: Holly Springs
Appendix F	Designated Area: Knightdale
Appendix G	Designated Area: Morrisville
Appendix H	Designated Area: Raleigh
Appendix I	Designated Area: Rolesville
Appendix J	Designated Area: Wake Forest
Appendix K	Designated Area: Wendell
Appendix L	Designated Area: Zebulon

ACCOMPANYING DOCUMENTS

Wake County Comprehensive Solid Waste Management Plan - a Current Assessment - June 1992.

Revised Commercial and Institutional and Industrial (CII) Matrix and Action Plan, Memo from CII Subcommittee

Triangle Recycling Resource Guide, Wake County

Proposal for Regionally Coordinated Household Hazardous Waste Programs

ATTACHMENT

Resolution Passed by Wake County Board of Commissioners Requesting Designated Geographic Area Authorization

List of Tables

Table

3-1	Wake County Population by Municipality
4-1	Waste Projected to be Landfilled
4-2	Waste Landfilled in Wake County
4-3	Population and Waste Flow

List of Figures

Table

3-1	Wake County and Incorporated Areas
6-1	Landfills in Wake County

Section 1

Request for Approval

This Solid Waste Management Plan for Wake County is submitted to fulfill the reporting and information requirements of the North Carolina Department of Environment, Health, and Natural Resources (DEHNR) to receive approval as a "designated geographic area." Through submission of this Plan to DEHNR, the Wake County Board of County Commissioners requests that all unincorporated areas in Wake County be classified as a "designated geographic area" as per North Carolina General Statutes 130A-294(a)(5a). As of the date of approval of this Plan by DEHNR, Wake County will be authorized to provide for the collection, transportation, storage, and disposal of all solid waste generated in the designated geographic area in accordance with this solid waste management plan. This concept is referred to in this plan as flow control.

1.1 Legislative Authority

The statutory authority for a flow control ordinance and the State authorizing a designated geographic area for the purpose of flow control is G.S. 130A-291(b) and G.S. 130A-294(a)(5a).

1.2 County Authority and Resolution

County authority for flow control is through "Section XVIII Flow Control", of the *Ordinance Regulating the Management of Solid Waste in Wake County, North Carolina*. The Wake County Resolution approving this Plan and requesting that the State designate the unincorporated area of the County as a "designated geographic area" for the purpose of flow control, was passed on September 7, 1993. A copy of this Resolution is included at the end of this Plan.

1.3 Area Requested for Approval as a Designated Geographic Area

The area being requested by Wake County for designation as a geographic area includes all unincorporated areas of the County. The unincorporated areas of the County include all geographic areas within Wake County but not within the twelve municipal boundaries within a city or town as defined by municipal charter designation and recognized by the State of North Carolina. These currently unincorporated areas contain approximately 30 percent of the County's population based on the 1990 census.

Section 2

Background

In July 1990 the Wake County Board of Commissioners created the Wake County Solid Waste Management Division and appointed a Solid Waste Advisory Committee. This Committee is authorized to make recommendations to the Board on issues, programs, and facilities needed for the environmentally sound and cost efficient management of solid waste generated in Wake County. The Advisory Committee, its appointed task forces and technical groups, represent municipalities, businesses, and citizens from the entire County. These groups have met regularly since that date to cooperatively study, evaluate, and analyze the various options for solid waste management available on a county-wide basis. All of the municipalities within Wake County have made a commitment to work with Wake County to jointly achieve the state mandated waste reduction goals and to develop environmentally sound, cost efficient solid waste management facilities. One of the many issues discussed by the Advisory Committee is forms of control over the collection, disposal, and management of waste. No official recommendation has been made at this time as to the form this control should take. However, it is recognized that some form of control is important to meet state and federal solid waste management environmental compliance regulations and waste reduction goals and to be able to plan for long term, cost efficient, environmentally sound management of solid waste.

The Wake County Board of Commissioners recognizes that the construction, operation, and continued maintenance of solid waste collection, recycling, and disposal facilities which meet federal and state regulations represents a major capital investment and long term financial commitment by Wake County residents and taxpayers. The design size and costs of these County-owned solid waste management facilities are both based and dependent on the quantities of solid waste that must be managed on a long term continuing basis. In order to develop a realistic long term plan for the most cost-efficient sizing and most environmentally sound solid waste management facilities, it is essential that Wake County maintain some

control over the quantities of solid waste it must manage. In order to insure that the public health and the environment are protected and that waste management goals are being met the County must be able to direct the quantities of solid waste to facilities which are both environmentally sound and which meet the mandates of the Solid Waste Management (SWM) Act of 1989.

Wake County is taking all necessary actions to design, site, permit, and construct solid waste management facilities which provide environmentally sound solid waste management as well as attempt to meet the mandates and goals set in the SWM Act of 1989. Facilities are being designed to provide adequate capacity to manage the waste flow generated by the projected County population for the next 20 years. Because of economies of scale, the larger the size of these facilities, the lower the proportional costs to taxpayers for such facilities. Flow control of collection and disposal activities is therefore necessary in order to develop realistic long term plans for the cost-efficient and environmentally sound management of solid waste by Wake County.

2.1 Applicability

This Plan currently applies to all solid waste generated in the unincorporated areas of Wake County that is placed in the waste stream for collection, transfer, disposal, composting, or recycling. This shall not be construed to prohibit the source separation of materials from solid waste prior to collection for disposal.

It is the intent of Wake County, through this Plan, to direct all solid waste generated in the unincorporated areas of the County to be managed and disposed of in County owned, operated or sponsored disposal or processing facilities. It is the intent of Wake County, through this Plan, to ensure that materials banned from the landfills or intended for recycling are managed in a manner consistent with the SWM Act of 1989 and County waste reduction initiatives. The export of solid waste from within the designated geographic area is prohibited. This will allow the current and planned County owned and financed facilities to

operate in a manner which is the most cost-efficient use of County tax dollars and insures environmentally sound management of solid waste generated in the County for the next thirty years.

2.2 Expansion of the Designated Geographic Area

It is the desire of Wake County to continue to expand the "designated geographic area" for the purposes of properly managing solid waste generated throughout the County. All municipalities within the County will be requested to enter into the necessary inter-local agreements and to join the County in requesting that they be included as part of the "designated geographic area" and manage solid waste in accordance with this Plan. Because of this intent this plan includes information describing how the County will manage all solid waste generated by the entire the County for at least twenty years. Specific demographic, waste generation, and the SWM Act of 1989 information for each of the twelve municipalities in Wake County is provided in Appendices A through L. As each municipality passes the required inter-local agreement, they will be forwarded to the North Carolina DEHNR Solid Waste Section and a request will be made to add that particular municipality to the designated geographic area.

2.3 Plan Overview

Pursuant to G.S. 130A-294(a)(5a), this plan contains:

- the existing and projected population for the designated geographic area,
- the quantities of solid waste generated and estimated to be generated in the designated area,
- the method of solid waste disposal to be used to manage the solid waste generated in the designated area,

- information on the landfill disposal capacity available to the County,
- the environmental impact of continued landfilling of waste,
- current and future programs designed to meet the SWM Act of 1989 waste reduction goals, and
- an overview of solid waste disposal methods being evaluated as future waste management options.

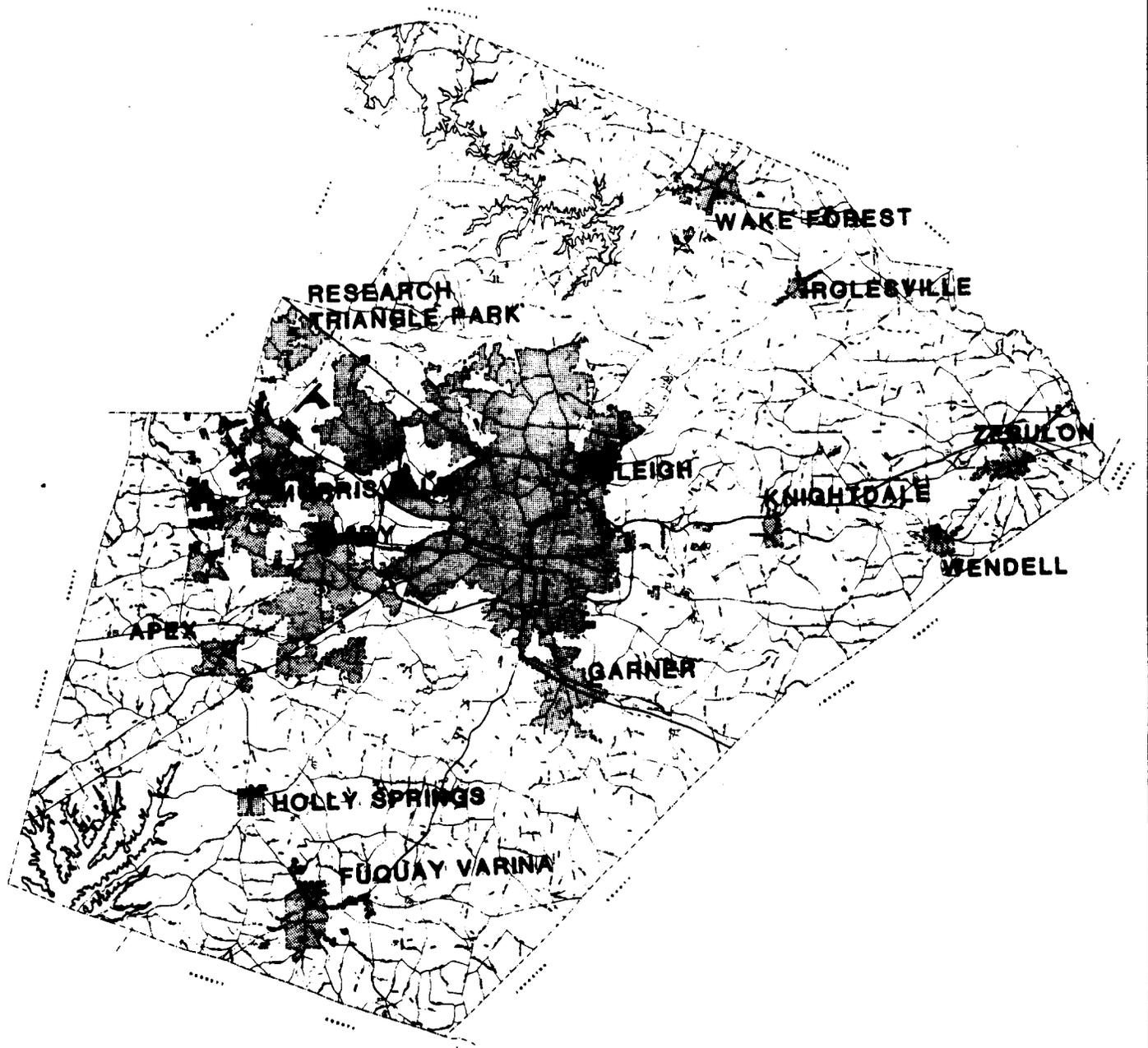
Section 3

Demographics

Wake County is located slightly east of the center of North Carolina. From east to west the County is about 36 miles wide. From north to south it is approximately 38 miles wide. The County contains approximately 864 square miles.

According to the 1990 U.S. Census, Wake County contains 423,380 persons. Its population reflects a steady growth rate that is expected to continue over the next ten to twenty years.

Wake County contains twelve incorporated cities and towns. Approximately 70 percent of the County's total population reside within the twelve municipalities, based on 1990 U.S. Census information. Figure 3-1 presents a map of the County and the twelve incorporated areas within it. Raleigh, the state capital and county seat, is situated in the center of the County. According to the 1990 U.S. Census, approximately 49 percent of the County's population lives in the City of Raleigh. Another 20 percent live in the other eleven remaining incorporated municipalities and almost 31 percent live in the unincorporated areas of the County. Table 3-1 presents this information together with estimated 1992 population, and population projections for 2000 and 2010.



WAKE COUNTY
NORTH CAROLINA

CDM

environmental engineers, scientists,
planners & management consultants

INCORPORATED AREAS

Figure No. 3-1

Table 3-1
Wake County Population by Municipality

Municipality	1990 U.S. Census¹	% of County	1992 Estimate	2000 Projection³	2010 Projection³
Apex	4,968	1.2%	5,559	8,227	13,163
Cary	43,858	10.4%	52,403	63,876	71,069
Fuquay- Varina	4,562	1.1%	4,815	6,199	7,839
Garner	14,967	3.5%	15,327	18,546	23,368
Holly Springs	908	0.2%	1,129	2,281	5,190
Knightdale	1,884	0.4%	2,281	4,197	8,603
Morrisville	1,022	0.2%	1,711	4,169	11,632
Raleigh	207,951	49.1%	222,455	283,990 ⁴	341,577 ⁴
Rolesville	572	0.1%	632	897	1,367
Wake Forest	5,769	1.4%	6,214	9,461	15,640
Wendell	2,822	0.7%	3,130	6,500	15,248
Zebulon	3,173	0.7%	3,212	4,827	7,861
Unincorporated Area	130,924	30.9%	123,935	153,186 ⁴	146,440 ⁴
County Total	423,380	100%	442,803²	566,362²	668,999²

Source:

¹U.S. Census

²Wake County Geographic Information Service (GIS)

³2000 and 2010 Projections based on telephone contact to individual municipalities (except as indicated).

⁴Based on mathematical extrapolation by CDM of percentage of total County Population expected to be within City of Raleigh and unincorporated area boundaries as percentage of total projected 2000 and 2010 populations determined by Wake County GIS.



Section 4

Solid Waste Quantities Generated

Estimates of solid waste quantities generated are based on the combination of the amount of materials being recycled, the amount of materials being disposed of in sanitary landfills, the amount of materials being disposed of at yard waste facilities, and the amount of materials being disposed of at inert debris (or construction and demolition) landfills. Based on information supplied to the State for 1990-91 by the County and all the municipalities within the county, an average of approximately 1.23 tons of waste per year is being generated by each Wake County resident. According to information supplied to the State by the municipalities, the majority of this waste, approximately 1.13 tons/person/year, is currently being landfilled in sanitary landfills, construction and demolition, or inert debris landfills in Wake County. Based on these estimates, Table 4-1 presents projections of the amount of waste that will require disposal through landfilling in Wake County through 2010. These numbers are not adjusted for any additional recycling beyond the approximate 0.1 ton (200 pounds) per person per year now being recycled. It is anticipated that at least this amount of materials will continue to be captured through existing and future recycling and waste reduction programs.

Scale records from all three sanitary landfills in Wake County are available since July 1, 1988. These records indicate that the per capita waste generation rate in Wake County has been reduced by 24.6 percent from 1.41 tons/persons/year in 1989-1990 to 1.07 tons/person/year in 1992-1993. Table 4-2 presents this information. The most probable reason for this reduction is the many active recycling and waste reduction programs operating in the County. If waste reduction and recycling efforts continue to be increasingly successful, it will reduce the projected amount of solid waste managed through landfilling.

**Table 4-1
Waste Projected to be Landfilled in Lined Landfills
(beginning in 1995)**

Year	Wake County	Tons of Waste	Cumulative
	Population*	Landfilled**	Total Tons***
1992	442,803	502,271	n/a
1993	458,248	519,791	n/a
1994	473,693	537,310	n/a
1995	489,138	554,829	554,829
1996	504,583	572,348	1,127,177
1997	520,028	589,868	1,717,045
1998	535,473	607,387	2,324,432
1999	550,918	624,906	2,949,339
2000	566,362	642,424	3,591,763
2001	576,626	654,067	4,245,830
2002	586,890	665,709	4,911,539
2003	597,154	677,352	5,588,891
2004	607,418	688,994	6,277,885
2005	617,682	700,637	6,978,522
2006	627,946	712,279	7,690,801
2007	638,210	723,922	8,414,723
2008	648,474	735,564	9,150,287
2009	658,738	747,207	9,897,493
2010	668,999	758,846	10,656,339

Source: *Wake County Geographic Information Service for 2000 and 2010.
Individual year pop numbers are linear projections by CDM based on 2000 and 2010 populations.

Note: **Tons generated is based on 1.13 tons/person /year.
No adjustment is made for increased recycling.
***Lined landfill is expected to be operational in January 1995.
Numbers may not add due to rounding.

**Table 4-2
Waste Landfilled in Wake County**

Year	Population	Tons Landfilled	Tons/person/year
July 1, 1989 - June 30-1990	400,193	565,900	1.414
July 1, 1990 - June 30, 1991	426,331	522,842	1.226
July 1, 1991 - June 30, 1992	442,803	502,992	1.134
July 1, 1992 - June 30, 1993	459,544	490,023	1.066

Source: Based on scale records at Wake County and City of Raleigh landfills as provided by Wake County Solid Waste Division

The per capita waste generation rate varies between municipalities as shown on Table 4-3. One reason for this variation may be the amount of commercial and industrial waste directly attributed to the individual municipality. Details on the amounts of waste being generated, landfilled, and recycled by each municipality within the County is presented in the Appendices to this plan.

Table 4-3
Population and Waste Flow

Appendix	POPULATION*			TONS LANDFILLED			TONS PER CAPITA** (tons/yr)
	Estimate	Projected		1992	Projected		
	1992	2000	2010	2000	2010		
A	5,559	8,227	13,163	5,578	8,255	13,208	1.0034
B	52,403	63,876	71,069	17,545.52	21,387	23,795	0.3348
C	4,815	6,199	7,839	2722	3,504	4,432	0.5653
D	15,327	18,546	23,368	7099.72	8,591	10,824	0.4632
E	1,129	2,281	5,190	389.56	787	1,791	0.3450
F	2,281	4,197	8,603	906.44	1,668	3,419	0.3974
G	1,711	4,169	11,632	300	731	2,040	0.1753
H	222,455	283,996	341,579	322,110	411,220	494,599	1.4480
I	632	897	1,367	286.80	407	620	0.4538
J	6,214	9,461	15,640	1,673.10	2,547	4,211	0.2692
K	3,130	6,500	15,248	4,211	8,745	20,514	1.3454
L	3,212	4,827	7,861	1,320	1,984	3,231	0.4110
M	123,935	153,186	146,440	138,145	170,750	163,230	1.1147
N	442,803	566,362	668,999	502,287	642,424	758,846	1.1343

Source: * Wake County Geographic Information Service; Town Planning Departments for 2000 and 2010; and CDM estimates for the City of Raleigh and unincorporated areas for 2000 and 2010. See Table 3-1.

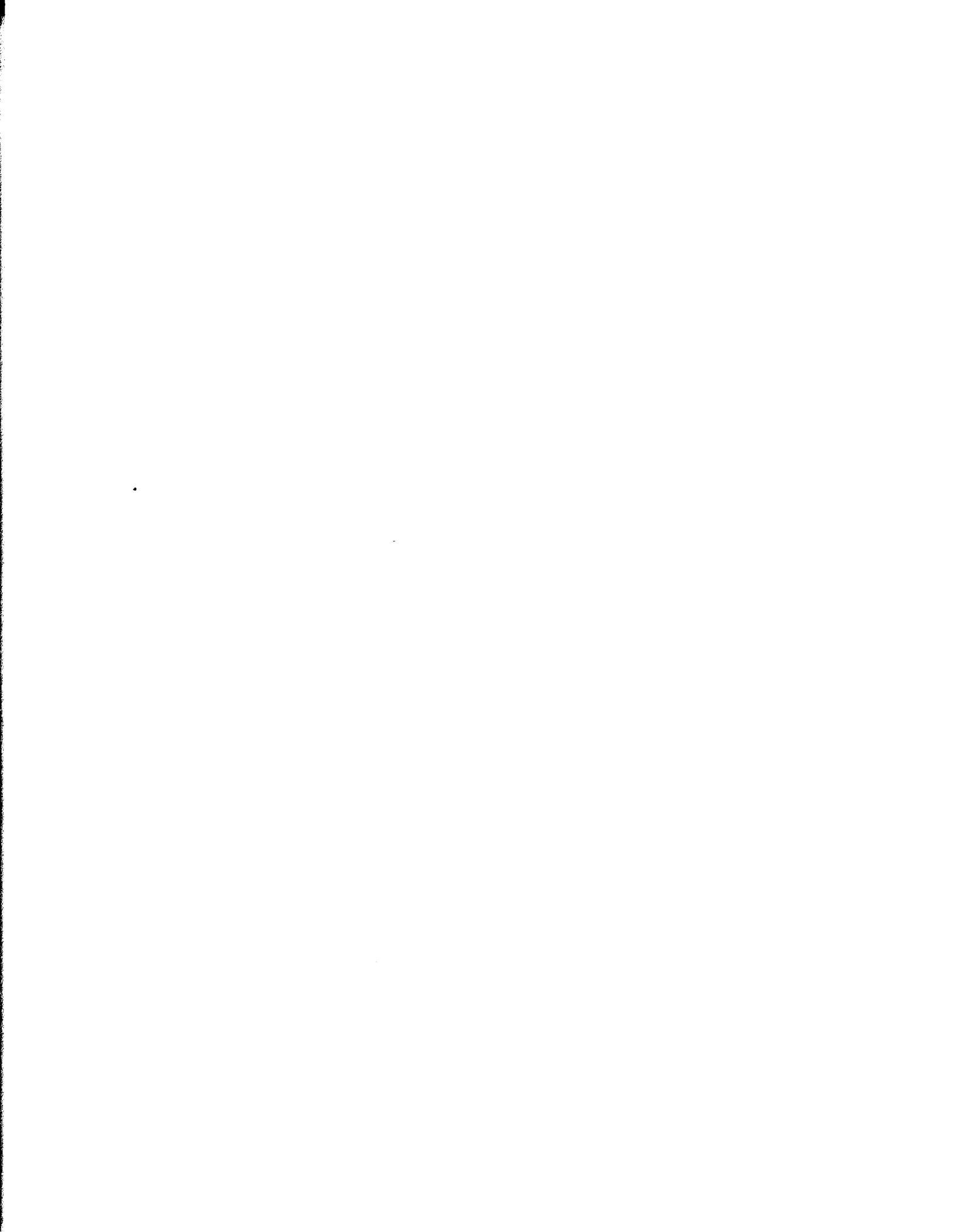
Note: Base year 1992. Tons per capita vary based on reporting variations by individual municipalities including or excluding commercial and industrial waste.

Section 5

Current and Future Solid Waste Collection Practices

Solid waste collection practices vary throughout Wake County. The specific collection practices of each municipality are presented in the Appendices to this Plan. Collection practices in the unincorporated areas of Wake County also vary. The County maintains ten convenience centers for residents to use in dropping off their own household solid waste. Residents in unincorporated areas also often contract directly with private or independent waste haulers for curbside collection of their household waste. The curbside collection of solid waste is available to all county residents. Businesses and industries also contract independently with private waste haulers of solid waste collection.

Section IV of the Ordinance for Managing Solid Waste in Wake County regulates the licensing of waste collectors within Wake County. By County ordinance, private waste haulers or collectors must pick up waste at least once per week from each regular customer. Currently waste haulers do not need to inform the County of where they take the waste they collect for disposal.



Section 6

Current and Future Landfill Disposal Capacity

6.1 Inert Debris Landfills

Approximately sixteen public and private landfills accepting land clearing and inert debris operate in Wake County. These landfills are geographically distributed throughout the County. The main landfills of this type are owned and operated by BFI, Rowlands, and Sorrells as shown on Figure 6-1.

6.2 Construction and Demolition Landfills

The primary landfill accepting construction and demolition (C&D) waste is the Holly Springs Disposal Facility, a BFI facility adjacent to the Feltonville Landfill. The County has one C&D landfill under construction at the North Wake Landfill and one planned at the South Wake facility. These three facilities contain adequate capacity for C&D waste from the entire County for the next twenty years.

6.3 Sanitary Landfills

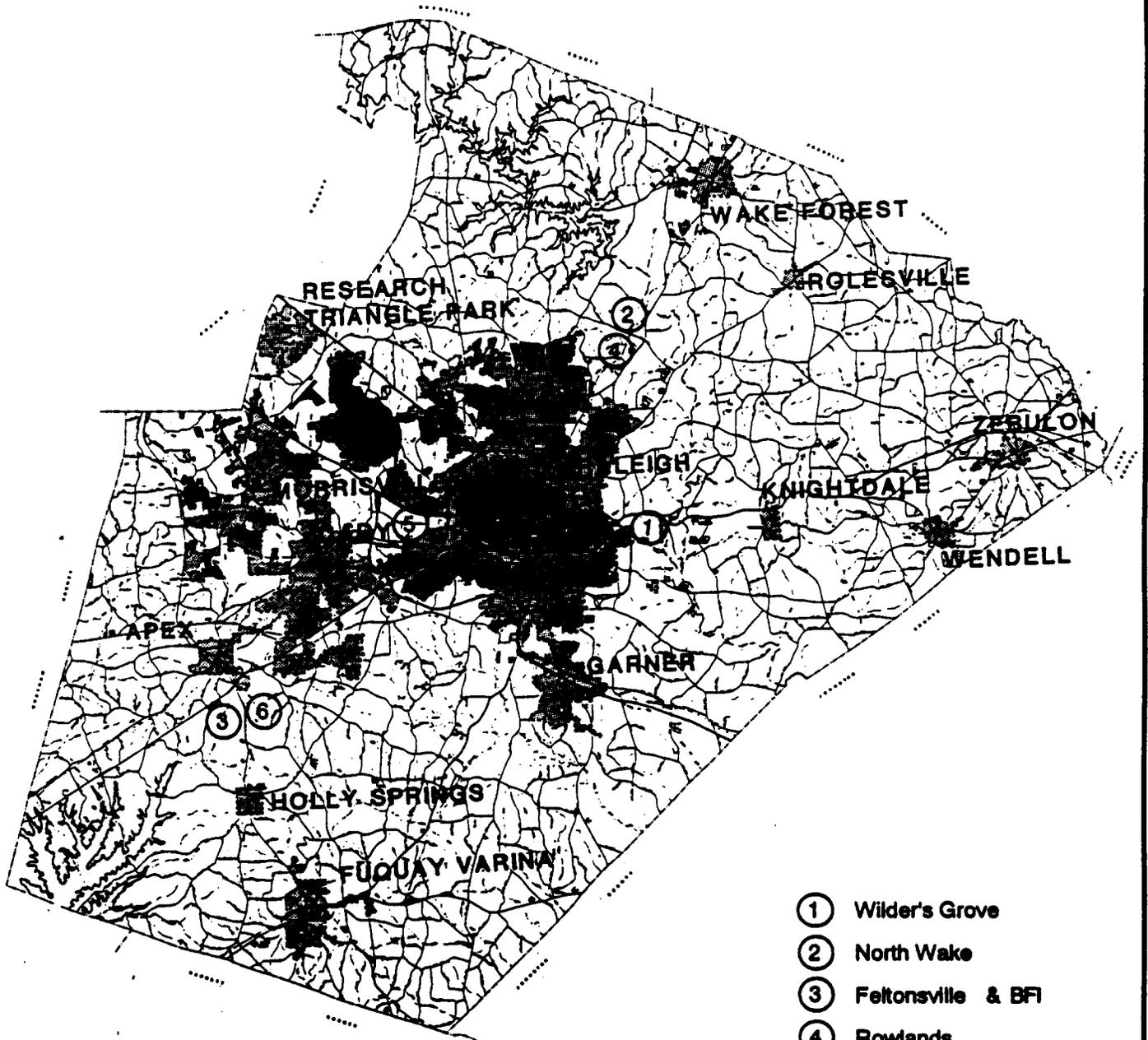
Three public sanitary landfills are permitted by the State to operate in Wake County. They are the City of Raleigh's Wilder's Grove landfill and Wake County's two landfills, North Wake and Feltonville. These landfills all operate based on current state and federal operating requirements. Figure 6-1 shows the location of the three permitted sanitary landfills in Wake County. These are the Feltonville and North Wake landfills owned by Wake County, and the Wilder's Grove landfill owned by the City of Raleigh.

The Wilder's Grove landfill receives an average of 735 tons per day (TPD) of solid waste. It is an unlined, 399 acre facility that has been both vertically and horizontal expanded since it opened in 1972. Based on information present in the City of Raleigh *Solid Waste Management Financing Study*, 1991, the Wilder's Grove Landfill is expected to reach capacity in approximately four years depending on approval of additional expansions.

The two Wake County landfills are also presently unlined landfills. The 300 acre Feltonsville landfill receives approximately 276 TPD of solid waste and the 216 acre North Wake landfill receives approximately 333 TPD of solid waste. Wake County is working aggressively to have permitted and construct two state of the art lined landfills adjacent to these existing unlined facilities. A Site Plan Application has been submitted to the North Carolina DEHNR Solid Waste Section for the proposed South Wake Solid Waste Management Facility. The 471 acre site is adjacent to and south of the existing Feltonsville landfill. The Site Plan Application is in the final stages of technical review. It is currently projected that the South Wake facility will begin receiving solid waste in late 1997.

A revised Construction Plan Application has been submitted to the North Carolina DEHNR Solid Waste Section for the North Wake Landfill. The remaining portions of the site have been re-designed to incorporate liners and leachate systems in accordance with the Subtitle D and new State regulations. The Construction Plan Application is in the final stages of permitting. It is anticipated that waste will be received in the new lined area by the end of 1994.

If these new facilities fail to be permitted, it may be difficult for the County to acquire additional land and site new landfills within this time frame. Wake County has made a commitment to its residents to maintain 10 years of sanitary landfill capacity. Since the County achieved its 25 percent recycling goal, these new lined facilities, if permitted, provide adequate capacity to receive the remaining solid waste from the entire County, including its twelve municipalities, until 2023.



- ① Wilder's Grove
- ② North Wake
- ③ Feltonville & BFI
- ④ Rowlands
- ⑤ N.C. State Fairgrounds
- ⑥ Sorrells

WAKE COUNTY
NORTH CAROLINA

LANDFILLS IN COUNTY

CDM
environmental engineers, scientists,
planners & management consultants

Figure No. 6-1

Section 7

Environmental Impact of Continued Landfilling of Waste

As mentioned, Wake County is working aggressively to construct two state of the art lined landfills to replace the two current unlined facilities at North Wake and South Wake. It is anticipated that the new North Wake lined cell will be operational in January 1995 and the South Wake facility will be operational in 1997. As of the date the County begins to use these new lined landfills, which include leachate collection systems, there should be no negative environmental effect to ground or surface water from waste landfilled at these new lined landfills. The two existing sites will be used until that time. Current operation, future closure and post closure monitoring will comply with all state and federal requirements. The County closely monitors both landfills to insure compliance with surface and subsurface water standards. The County does not anticipate any negative environmental impacts from continued landfilling in these two sites until the new lined landfills are operational.

Wake County's engineering consultant, Camp Dresser & McKee (CDM) reviewed all available ground and surface water analytical data and any correspondence from regulatory agencies contained in the Wake County files, to identify the potential for known releases from the North Wake and Feltonsville landfills. Analytical data is available from the North Wake landfill since operations began in December 1986 and from the Feltonsville Landfill since operations began in 1980.

7.1 North Wake Landfill

Ground and surface water samples have been collected from five monitor wells and three surface water sampling locations at the North Wake Landfill on a semi-annual basis since January 1987.

The analytical data indicates the presence of iron and/or manganese in both the ground and surface water samples. Occasionally, concentrations of arsenic, barium, chromium, cadmium, and lead have also been detected in the ground water samples and selenium, lead and mercury in the surface water samples.

The presence of iron and manganese in the water samples collected from the North Wake site can be considered naturally occurring elements. The presence of other metals above the North Carolina water quality standards, while detected in locations (MW-1,-2,-3, -4, and the upgradient surface water sampling locations) not likely affected by operations at the current cell, are not normally naturally occurring elements. The presence of these metals could be attributed to off-site sources or potentially from landfill operations. Only one monitor well and one surface water sampling location are topographically downgradient from the existing landfill. Analytical results from these location do not indicate significant impact from the landfill at this time. However, this area of the landfill is not adequately monitored to determine if releases have occurred. Additional wells are being installed to determine if releases have occurred from the existing landfill.

7.2 Feltonville Landfill

Ground water samples were collected intermittently at the Feltonville Landfill, beginning in 1980 when one sample was collected from an unknown well. Laboratory analyses indicated concentrations of iron and manganese above North Carolina water quality standards. Samples were then collected on a yearly basis beginning in 1982 to 1987. Generally four or five wells were sampled at each event with iron and manganese the only exceedances in ground water

quality standards. Sampling of all seven monitor wells and four surface water sampling locations was begun on a semi-annual basis beginning in 1988. Iron and/or manganese are the most prevalent compounds detected in all monitor wells and surface water samples, which would indicate that these elements are naturally occurring. Concentrations of arsenic, barium, chromium, cadmium, lead, and mercury were also detected in concentrations above the water quality standards in both ground and surface water sample. Barium, cadmium, chromium, and lead were detected in upgradient surface water samples, cadmium was detected in a downgradient surface water sample. There are no upgradient monitor wells at the Feltonville Landfill.

Elevated Chemical Oxygen Demand (COD), Total Dissolved Solids (TDS) and Specific Conductance levels were detected in MW-2 in both 1992 sampling events. MW-2 is located close to a closed cell and the elevated COD levels could indicate a potential release.

Laboratory analyses indicates that there may be a potential release at the Feltonville Landfill, particularly in the area of MW-2. A monitor well is being installed in the dike to monitor for potential releases flowing along the dike.



Section 8

Current and Future Programs Designed to Meet SWM Act of 1989 Waste Reduction Goals

Wake County, the incorporated municipalities within the County, and the Wake County Solid Waste Advisory Committee are actively working to achieve the State's goal of 40 percent waste reduction by 2001. Numerous County-wide and local programs have been implemented to educate the public about recycling and waste reduction and provide opportunities to recycle, and to meet the SWM Act of 1989 bans on landfilling of certain materials.

Through the Advisory Committee, Wake County and the incorporated municipalities in Wake County, have agreed to the twenty goals for solid waste management as presented in the *North Carolina Recycling and Solid Waste Management Plan* (February, 1992). Most municipalities have prepared a "current assessment" indicating how each goal is being addressed by their municipality. The *Wake County Comprehensive Solid Waste Management Plan - A Current Assessment - June 1992* accompanies this document. It presents the Wake County programs and plans for addressing each of these twenty State solid waste management goals.

Also accompanying this Plan is a memo presenting a *Revised Commercial Institutional and Industrial (CII) Matrix and Action Plan*. This document contains the recommended actions to encourage private sector involvement in achieving the waste reduction goals agreed to by the Advisory Committee and its task forces.

Many private and public facilities have been constructed to accept, process, and market materials for recycling. A copy of the *Triangle Recycling Resource Guide*, accompanying this Plan, details the many recycling facilities and programs available in Wake County. A detailed study conducted in August 1992 by the Triangle Region Solid Waste Planners Committee indicated that there are adequate facilities for handling recyclable in Chatham,

Durham, Johnston, Orange, and Wake Counties to achieve the 40 percent reduction goals by 2001.

The Appendices to this plan present some of the recycling programs currently operating and future efforts towards waste reduction by each of the twelve municipalities in Wake County.

8.1 Recycling and Waste Reduction

Wake County provides a variety of county-wide programs and facilities to encourage and facilitate recycling and waste reduction. Many of the municipalities in Wake County are too small to provide recycling programs and facilities, and therefore depend on Wake County for these type of programs. The County has demonstrated its support for recycling by sponsoring county-wide and local recycling programs, and by hiring a recycling coordinator in February of 1990 and a Solid Waste Education Specialist in November of 1991. In 1993 the County will hire a commercial waste reduction specialist to focus on providing education and technical assistance to the private sector. The Solid Waste Management Division manages the recycling programs and facilities that serve the entire County. Some of these programs include:

- **Maintaining recycling drop-off boxes at all ten convenience centers (since January 1991)**
- **Coordinating the office paper and corrugated cardboard recycling program within Wake County government offices**
- **Establishing a recycled materials procurement program for County government**
- **Providing public education on recycling to residents, business, and industry**

- Working with schools, state government offices, and the media to promote recycling education
- Establishing 50 drop-off sites at schools in Wake County (since July 1990)
- Establishing 21 drop-off sites for the collection and recycling of old telephone books
- Constructing of an additional convenience center and recycling drop-off facility in 1993-1994
- Contracting with a local waste hauler to market the recycled materials collected in the County

8.2 Management of Materials Banned from Landfilling

The SWM Act of 1989 bans a number of materials from being landfilled. Wake County has established programs and multi-material drop-off facilities to meet the County-wide needs for the environmentally safe management of these banned materials. These facilities have been sized to meet county-wide waste generation capacity needs.

Tires, White Goods, Used Oil, Lead Acid Batteries

Wake County's two multi-material drop-off facilities accept corrugated cardboard, used motor oil, lead-acid batteries, white goods, and scrap tires. These facilities are located at the two County owned landfills.

Yard Waste

Wake County has constructed a transfer station to receive commercial and residential yard waste at the North Wake landfill. Yard waste from this North Wake transfer station is transferred to the Holly Springs Disposal Facility (a BFI facility) for composting. Yard waste from the southern part of the County is sent directly to the BFI facility for composting. The City of Raleigh also maintains a major yard waste compost station for its residents.

Household Hazardous Waste

Wake County, jointly with the City of Raleigh, annually sponsors two Household Hazardous Waste (HHW) collection days for all residents of Wake County. The County also participated in a regional study conducted by the Triangle Region Solid Waste Planners Committee to evaluate the costs and benefits of constructing permanent HHW facilities. A copy of this study accompanies this Plan. Based on the study and pending negotiations with disposal firms, Wake County is planning to construct two permanent HHW collection facilities. One will be at each of the two County owned landfills.

Section 9

Future Waste Management Options

In July of 1990, Wake County appointed a Solid Waste Advisory Committee to discuss, evaluate, and make recommendations to the County Board of Commissioners concerning various solid waste management options for Wake County. Many of the current recycling and waste reduction programs in place in Wake County today, are as a result of the efforts, ideas, and cooperative agreements reached through this Advisory Committee.

Several technical sub-groups and task force groups have been appointed by the Advisory Committee. These groups are made up of representatives from the municipalities within Wake County, business, industry, waste haulers, concerned citizens, municipal staff, and elected officials. Their purpose is to focus on specific issues and conduct detailed analysis to provide technical guidance and advice to the Advisory Committee. These groups have been instrumental in advising Wake County government to develop and implement new programs and facilities and recommending necessary changes to the County Solid Waste Management Ordinance. These groups have been instrumental in initiating and implementing waste reduction programs for businesses and industries including the County's current surcharge on waste loads of commercial corrugated cardboard.

Currently, citizen advisory groups are evaluating the environmental, technical, economic, and legal feasibility of implementing a municipal solid waste composting facility and a waste-to-energy facility to further reduce the volume of solid waste requiring disposal in Wake County landfills. These options are being evaluated as alternatives to landfilling. Current and planned recycling and waste reduction programs would continue under both options. Some landfilling of waste would also continue under both these options. The technical and financial feasibility of either of these alternatives is dependent on a guaranteed waste flow as presented in this plan.



Appendix A

Designated Area:

Apex

This appendix presents demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Apex.

1.0 POPULATION (See Table A-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

According to information submitted by the Town of Apex to the state, 5,578 tons of waste was sent to the Wake County Sanitary Landfill and Sorrell's Landfill for the period July 1, 1991, through June 30, 1992. Based on a population estimate of 5,559, this figure equates to approximately 1.003 tons per person per year or 5.5 pounds per person per day.

2.2 Projections

The solid waste quantity projections below were derived from straight-line population projections and assume no quantity reductions resulting from further source reduction and recycling (assumes 1.003 tons/person/yr).

TABLE A-1

Year	Population Projection	Solid Waste Projection (tons)
1992	5,559 (est.)	5,578 (1992 value)
2000	8,227	8,252
2010	13,163	13,203

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

Apex provides a privately contracted door-to-door solid waste collection service once-weekly for its residents. Residents pay a monthly fee directly to the town.

3.2 Commercial

Apex provides a privately contracted door-to-door solid waste collection service twice weekly for commercial businesses with the option of contracting through the town with Waste Industries for a 4, 6, or 8 cubic-yard dumpster if twice-weekly service is inadequate. Business is charged the exact contract price the town has with Waste Industries. If still more collection is needed, the business can privately contract.

4.0 SOLID WASTE DISPOSAL METHOD

As of June 30, 1992, all solid waste is sent to the Wake County Sanitary Landfill and some construction and demolition waste is sent to Sorrell's Landfill.

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

Apex is currently served by a user-funded once-weekly curbside recycling program provided by BFI.

5.2 Types and Quantities of Materials Collected

The Apex curbside recycling program accepts green, brown, and clear glass, PETE and HDPE plastic, aluminum cans, newsprint, and magazines. *

Material	Quantity (tons)
Mixed Glass	67.22
PETE	6.96
HDPE	6.95
Aluminum Cans	5.75
Newsprint	194.41
Magazines	16.40
Total	297.69

* Based on information provided to the state for the period 7/1/91-6/30/92.

5.3 Management of Materials Regulated by the Special Waste Mgt. Act of 1989

5.3.1 Tires

As of June 30, 1992, no scrap tire collection site was provided by Apex.

5.3.2 Used Oil

A public collection site for used oil is located at the Apex Public Works Dept.

5.3.3 Lead-Acid Batteries

As of June 30, 1992, Apex did not provide for the collection of used lead-acid batteries.

5.3.4 Household Hazardous Waste

As of June 30, 1992, Apex did not provide for the collection of household hazardous waste.

5.3.5 White Goods

Apex provides a household collection service for white goods.

5.3.6 Yard Waste

The Town of Apex owns a chipper and chips all limbs and leaves for use as mulch. Yard waste is separately collected from trash.

Appendix B

Designated Area:

Cary

This appendix provides demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Cary.

1.0 POPULATION (See Table B-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

According to information submitted by the Town of Cary to the state, 17,545.52 tons of waste was sent to the Feltonville and Buffalo Landfills in Wake County for the period July 1, 1991, through June 30, 1992. Based on the County's January 1992 population estimate of 52,403, this figure equates to approximately 0.33482 tons per person per year or 1.8 pounds per person per day.

2.2 Projections

Solid waste quantity projections were derived from population projections provided by the Wake County GIS. Projections assume no quantity reductions resulting from further source reduction and recycling (assumes 0.33482 tons/person/yr).

TABLE B-1

Year	Population Projection	Solid Waste Projection (tons/yr.)
1992	52,403 (est.)	17,545.52 (current)
2000	63,876	21,387
2010	71,069	23,795

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

The Town of Cary provides door-to-door solid waste collection to residents using their own collection vehicles.

3.2 Commercial

The Town of Cary provides solid waste collection service to business provided the refuse can fit into standard containers. If additional collection is needed, the business can privately contract.

4.0 SOLID WASTE DISPOSAL METHOD

As of June 30, 1992, all solid waste is sent to the Feltonville and Buffalo Landfills in Wake County.

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

Cary is currently served by a once-weekly privately contracted curbside recycling program which is funded from taxes (general fund), user fees, and the sale of recyclables. The town also provides a drop-off recycling site.

5.2 Types and Quantities of Materials Collected

The Cary recycling program accepts green, brown, and clear glass, all types of plastic bottles, steel cans, aluminum cans, newsprint, cardboard, and office paper. *

Material	Quantity (tons)
Mixed Glass	686.42
Mixed Plastic	29.94
Aluminum Cans	43.90
Steel Cans	0.25
Other Metal	8.85
Mixed Paper	1778.36
Total	2547.72

* Based on information provided to the state for the period 7/1/91-6/30/92.

5.3 Management of Materials Regulated by the Special Waste Mgt. Act of 1989

5.3.1 Tires

As of June 30, 1992, no scrap tire collection site was provided by Cary.

5.3.2 Used Oil

A public collection site is available for the collection of used oil.

5.3.3 Lead-Acid Batteries

As of June 30, 1992, Cary did not provide for the collection of used lead-acid batteries.

5.3.4 Household Hazardous Waste

As of June 30, 1992, Cary did not provide for the collection of household hazardous waste.

5.3.5 White Goods

Cary provides both a household collection service and a drop-off site for disposal of white goods.

5.3.6 Yard Waste

Cary has designated a yard waste collection day.

Appendix C

Designated Area:

Fuquay-Varina

This appendix presents demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Fuquay-Varina.

1.0 POPULATION (See Table C-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

According to information submitted by the Town of Fuquay-Varina to the state, 2,722 tons of solid waste was sent to the Wake County Sanitary Landfill for the period July 1, 1991, through June 30, 1992. Based on a population estimate of 4,815, this figure equates to approximately 0.5653 tons per person per year or 3.1 pounds per person per day.

2.2 Projections

The solid waste quantity projections below were derived from straight-line population estimates and assume no quantity reductions resulting from further source reduction and recycling (assumes 0.5653 tons/person/yr).

TABLE C-1

Year	Population Projection	Solid Waste Projection (tons/yr)
1992	4,815 (est.)	2,722 (current)
2000	6,199	3,504
2010	7,839	4,431

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

Fuquay-Varina provides door-to-door solid waste collection services using its own vehicles on a once-weekly basis.

3.2 Commercial

Fuquay-Varina provides a subsidized collection service to its businesses on a twice weekly basis. Business can privately contract if additional service is needed.

4.0 SOLID WASTE DISPOSAL METHOD

As of June 30, 1992, all solid waste was sent to the Wake County Sanitary Landfill.

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

Fuquay-Varina is currently served by a privately-contracted once-weekly curbside recycling program funded through city taxes. The town also provides a drop-off site.

5.2 Types and Quantities of Materials Collected

The Fuquay-Varina recycling program accepts green, brown, and clear glass, PETE and HDPE plastic, aluminum and steel cans, newsprint, and office paper. *

Material	Quantity (tons)
Mixed Glass	29
Mixed Plastic	6
Aluminum Cans	5
Steel Cans	1
Newsprint	97
Office Paper	1
Total	139

* Based on information provided to the state for the period 7/1/91-6/30/92.

5.3 Management of Materials Regulated by the Special Waste Mgt. Act of 1989.

5.3.1 Tires

As of June 30, 1992, no scrap tire collection site was provided by Fuquay-Varina.

5.3.2 Used Oil

As of June 30, 1992, no used oil collection site was provided by Fuquay-Varina.

5.3.3 Lead-Acid Batteries

As of June 30, 1992, no used lead-acid battery collection site was provided by Fuquay-Varina.

5.3.4 Household Hazardous Waste

As of June 30, 1992, no household hazardous waste collection site was provided by Fuquay-Varina.

5.3.5 White Goods

The Town of Fuquay-Varina provides a household collection service for the disposal of white goods.

5.3.6 Yard Waste

Because of the somewhat rural nature of this town and its large lots, not many households set out grass clippings for collection, but there is a designated collection day for bulky items such as limbs. The town owns a chipper and chips these for use as mulch.

Appendix D

Designated Area:

Garner

This appendix provides demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Garner.

1.0 POPULATION (See Table D-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

According to information submitted by the Town of Garner to the state, 7,099.72 tons of solid waste was sent to the Feltonville and Buffalo Landfills in Wake County for the period July 1, 1991, through June 30, 1992. Based on a population estimate of 15,327, this figure equates to approximately 0.4632 tons per person per year or 2.5 pounds per person per day.

2.2 Projections

The solid waste quantity projections below were derived from straight-line population projections and assume no quantity reductions resulting from further source reduction and recycling (assumes 0.4632 tons/person/yr).

TABLE D-1

Year	Population Projection	Solid Waste Projection (tons)
1992	15,327 (est.)	7,099.72 (current)
2000	18,546	8,591
2010	23,368	10,824

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

The Town of Garner provides a privately contracted door-to-door solid waste collection service to its residents. Residents pay a monthly charge with their water bills.

3.2 Commercial

The Town of Garner provide the same collection service to small businesses. If additional collection is needed, the business must privately contract with one of the town's permitted haulers.

4.0 SOLID WASTE DISPOSAL METHOD

As of June 30, 1992, all solid waste was sent to the Feltonville and Buffalo Landfills.

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

Garner is currently served by a privately contracted twice-per-month curbside recycling program.

This program is supported through city taxes.

5.2 Types and Quantities of Materials Collected

The Town of Garner curbside recycling program accepts green, brown, and clear glass, all types of recyclable plastic, aluminum cans, newsprint, and office paper. *

Material	Quantity (tons)
Mixed Glass	96.92
Mixed Plastic	25.18
Aluminum Cans	10.28
Newsprint	319.42
Office Paper	3.49
Total	455.29

* Based on information provided to the state for the period 7/1/91-6/30/92.

5.3 Management of Materials Regulated by the Special Waste Mgt. Act of 1989.

5.3.1 Tires

As of June 30, 1992, the Town of Garner did not provide for the collection of scrap tires.

5.3.2 Used Oil

As of June 30, 1992, the Town of Garner did not provide for the collection of used oil.

5.3.3 Lead-Acid Batteries

As of June 30, 1992, the town of Garner did not provide for the collection of used lead-acid batteries.

5.3.4 Household Hazardous Waste

As of June 30, 1992, the Town of Garner did not provide for the collection of household hazardous waste.

5.3.5 White Goods

The Town of Garner provides a household collection service for the disposal of white goods.

5.3.6 Yard Waste

Yard waste is collected separately on the same day as other refuse and is hauled to the Waste Industries facility in Wake County.

Appendix E

Designated Area:

Holly Springs

This appendix provides demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Holly Springs.

1.0 POPULATION (See Table E-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

According to information submitted by the town of Holly Springs to the state, 389.56 tons of solid waste was sent to the Feltonville Landfill in Wake County for the period July 1, 1991 through June 30, 1992. Based on a population estimate of 1,129 this figure equates to 0.34505 tons per person per year or 1.9 pounds per person per day.

2.2 Projections

The solid waste quantity projection below was derived from a straight-line population projection and assumes no quantity reductions resulting from further source reduction and recycling (assumes 0.34505 tons/person/yr).

TABLE E-1

Year	Population Projection	Solid Waste Projection (tons)
199	21,129 (est)	389.56 (1992 value)
2000	2,281	787
2010	5,190	1,791

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

The Town of Holly Springs provides a privately contracted once-weekly solid waste collection service to residents. Residents pay the town a monthly fee for this service.

3.2 Commercial

The Town of Holly Springs provides the same service to small businesses. If additional collection is needed, the business can privately contract.

4.0 SOLID WASTE DISPOSAL METHOD

All solid waste is sent to the Feltonville Landfill in Wake County.

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

As of June 30, 1992, no curbside collection was available. However, a drop-off area is available.

5.2 Types and Quantities of Materials Collected

The Holly Springs recycling drop-off area accepts green, brown, and clear glass, PETE, HDPE, aluminum cans, steel cans, newsprint, and office paper. *

Material	Quantity (tons)
Mixed Glass	9.85
Mixed Plastic	3.35
Aluminum Cans	0.94
Steel Cans	0.11
Mixed Paper	1.21
Total	15.46

* Based on information provided to the state for the period 7/1/91-6/30/92.

Management of Materials Regulated Under the Special Waste Mgt. Act of 1989

5.3.1 Tires

As of June 30, 1992, the Town of Holly Springs did not provide for the collection of scrap tires.

5.3.2 Used Oil

As of June 30, 1992, the Town of Holly Springs did not provide for the collection of used oil.

5.3.3 Lead-Acid Batteries

As of June 30, 1992, the Town of Holly Springs did not provide for the collection of used lead-acid batteries.

5.3.4 Household Hazardous Waste

As of June 30, 1992, the Town of Holly Springs did not provide for the collection of household hazardous waste.

5.3.5 White Goods

As of June 30, 1992, the Town of Holly Springs did not provide for the collection of white goods.

5.3.6 Yard Waste

Yard waste is managed through a separate contract a private hauler who is responsible for complying with the yard waste ban.

Appendix F

Designated Area:

Knightdale

This appendix provides demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Knightdale.

1.0 POPULATION (See Table F-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

According to information submitted by the Town of Knightdale to the state, 906.44 tons of solid waste was sent to the Wilder's Grove Landfill for the period July 1, 1991, through June 30, 1992. Based on a population estimate of 2,281, this figure equates to approximately 0.39738 tons per person per year or 2.2 pounds per person per day.

2.2 Projections

The solid waste quantity projections below were derived from a straight-line population projection and assumes no quantity reductions resulting from further source reduction and recycling (assumes 0.39738 tons/person/yr).

TABLE F-1

Year	Population Projection	Solid Waste Projection (tons)
1992	2,281 (est)	906.44 (1992 value)
2000	4,197	1,668
2010	8,603	3,419

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

The Town of Knightdale provides a privately contracted once-weekly door-to-door solid waste collection service to its residents. Residents pay a monthly fee directly to the town.

3.2 Commercial

Businesses must privately contract for their solid waste collection.

4.0 SOLID WASTE DISPOSAL METHOD

All solid waste is sent to the Wilder's Grove Landfill.

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

The Town of Knightdale is currently served by a privately contracted once-weekly curbside recycling program funded through user fees.

5.2 Types and Quantities of Material Collected

The Town of Knightdale recycling program accepts green, brown, and clear glass, PETE and HDPE plastic, aluminum cans, steel cans, and newsprint. *

Material	Quantity (tons)
Mixed Glass	24.04
Mixed Plastic	4.01
Aluminum Cans	3.00
Steel Cans	1.51
Newsprint	81.66
Total	114.22

* Based on information provided to the state for the period 7/1/91 through 6/30/92.

5.3 Management of Materials Regulated by the Special Waste Mgt. Act of 1989

5.3.1 Tires

As of June 30, 1992, Knightdale did not provide for the collection of scrap tires.

5.3.2 Used Oil

As of June 30, 1992, Knightdale did not provide for the collection of used oil.

5.3.3 Lead-Acid Batteries

As of June 30, 1992, Knightdale did not provide for the collection of used lead-acid batteries.

5.3.4 Household Hazardous Waste

As of June 30, 1992, Knightdale did not provide for the collection of household hazardous waste.

5.3.5 White Goods

The Town of Knightdale provides a household collection service for the disposal of white goods.

5.3.6 Yard Waste

Separate collection days have been formalized, and a bag and sticker system is being researched.

Appendix G

Designated Area:

Morrisville

This appendix presents demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Morrisville.

1.0 POPULATION (See Table G-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

According to information submitted by the Town of Morrisville to the state, approximately 300 tons of solid waste was sent to the Wake County Sanitary Landfill for the period July 1, 1991 through June 30, 1992. Based on a population estimate of 1,711, this figure equates to 0.175 tons per person per year or approximately 1 pound per person per day.

2.2 Projections

The solid waste quantity projections below were derived from a straight-line population projection and assumes no quantity reductions resulting from further source reduction and recycling (assumes 0.175 tons/person/yr).

TABLE G-1

Year	Population Projection	Solid Waste Projection (tons)
1992	1,711 (est)	300 (1992 value)
2000	4,169	731
2010	11,632	2,040

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

The Town of Morrisville provides a privately contracted door-to-door solid waste collection service once-weekly to its residents. This service is included with city taxes.

3.2 Commercial

The Town of Morrisville does not provide solid waste collection for business; they must privately contract.

4.0 SOLID WASTE DISPOSAL METHOD

All solid waste is sent to the Wake County Sanitary Landfill.

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

As of June 30, 1992, the Town of Morrisville did not provide any recycling programs.

5.2 Management of Materials Regulated by the Special Waste Mgt. Act of 1989

5.2.1 Tires

As of June 30, 1992, the Town of Morrisville did not provide for the collection of scrap tires.

5.2.2 Used Oil

As of June 30, 1992, the Town of Morrisville did not provide for the collection of used oil.

5.2.3 Lead-Acid Batteries

The Town of Morrisville does provide for the collection of used lead-acid batteries.

5.2.4 Household Hazardous Waste

As of June 30, 1992, the Town of Morrisville did not provide for the collection of household hazardous waste.

5.2.5 White Goods

The Town of Morrisville provides a household collection service for the disposal of white goods.

5.2.6 Yard Waste

Yard waste is collected separately from other refuse. The waste hauler is responsible for complying with the yard waste ban.



Appendix H

Designated Area:

Raleigh

This appendix presents demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Raleigh.

1.0 POPULATION (See Table H-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

According to information submitted by the City of Raleigh to the state, 322,110 tons of solid waste was sent to the Wilder's Grove and Durant Landfills. Based on the City Planning Dept. 1992 population estimate of 222,455, this figure equates to approximately 1.4480 tons per person per year or approximately 7.9 pounds per person per day.

2.2 Projections

Solid waste quantity projections were made based on a mathematical formula of tons per year times population projections. The projections assume no quantity reductions resulting from further source reduction and recycling (assumes 1.4480 tons/person/yr).

TABLE H-1

Year	Population Projection	Solid Waste Projection (tons)
1992	222,455 (Planning Dept. est.)	322,110 (1992 value)
2010	283,996	411,220
2020	341,579	494,599

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

The City of Raleigh provides an in-house twice-weekly solid waste collection service for its residents using its own vehicles. The service is funded through city taxes.

3.2 Commercial

The City of Raleigh provides the same service to businesses, who must privately contract if additional service becomes necessary.

4.0 SOLID WASTE DISPOSAL METHOD

All solid waste is sent to the Wilder's Grove and North Wake Landfills.

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

The City of Raleigh provides a user-funded in-house curbside recycling program.

5.2 Types and Quantities of Materials Collected

The City of Raleigh curbside recycling program accepts green, brown, and clear glass, PETE, HDPE, aluminum cans, steel cans, and newsprint. *

Material	Quantity (tons)
Mixed Glass	2,233.45
PETE	N/A
HDPE	271.61
Aluminum Cans	N/A
Steel Cans	280.58
Mixed Paper	6798.37
Total	9584.01

* Based on Information provided to the state for the period 7/1/91-6/30/92.

5.3 Management of Materials Regulated by the Special Waste Mgt. Act of 1989

5.3.1 Scrap Tires

Scrap tires are collected at Wilder's Grove, Feltonville, and North Wake Landfills.

5.3.2 Used Oil

The Public Utilities Operations Center serves as a used oil collection site.

5.3.3 Lead-Acid Batteries

Lead-acid batteries are collected at two designated sites on the two household hazardous waste days held each year.

5.3.4 Household Hazardous Waste

Two sites are designated on two days each year for the collection of household hazardous waste.

5.3.5 White Goods

White goods are collected at the Wilder's Grove Landfill.

5.3.6 Yard Waste

The City has designated a yard waste day for each week and operates a composting facility near the Wilder's Grove Landfill. All yard waste generated in the city is composted at this site. All yard waste generated in the city is composted at this site. During the first six months of operation, this facility managed over 7,850 tons of yard waste.

Appendix I

Designated Area:

Rolesville

This appendix presents demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Rolesville.

1.0 POPULATION (See Table I-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

According to information submitted by the Town of Rolesville to the state, 286.80 tons of solid waste was sent to the North Wake Landfill for the period July 1, 1991 through June 30, 1992. Based on a population estimate of 632, this figure equates to approximately 0.4538 tons per person per year or 2.5 pounds per person per day.

2.2 Projections

The solid waste quantity projections below were derived from a straight-line population projection and assumes no quantity reductions resulting from further source reduction and recycling (assumes 0.4538 tons/person/yr).

TABLE I-1

Year	Population Projection	Solid Waste Projection (tons)
1992	632 (est)	286.80 (1992 value)
2000	897	407
2010	1,367	620

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

The Town of Rolesville provides a once-weekly privately contracted solid waste collection service to its residents, who pay a monthly fee directly to the town.

3.2 Commercial

The Town of Rolesville provides a twice-weekly privately contracted solid waste collection service for businesses, which pay a monthly fee directly to the town.

4.0 SOLID WASTE DISPOSAL METHOD

All solid waste is sent to the North Wake Landfill.

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

The Town of Rolesville is currently served by a once-weekly privately contracted curbside recycling program.

5.2 Types and Quantities of Material Collected

The Town of Rolesville recycling program accepts green, brown, and clear glass, aluminum cans, and newsprint. No current quantity information was reported to the state.

5.3 Management of Materials Regulated by the Special Waste Mgt. Act of 1989

5.3.1 Tires

As of June 30, 1992, the Town of Rolesville did not provide for the collection of scrap tires.

5.3.2 Used Oil

As of June 30, 1992, the Town of Rolesville did not provide for the collection of used oil.

5.3.3 Lead-Acid Batteries

As of June 30, 1992, the Town of Rolesville did not provide for the collection of used oil.

5.3.4 Household Hazardous Waste

As of June 30, 1992, the Town of Rolesville did not provide for the collection of household hazardous waste.

5.3.5 White Goods

As of June 30, 1992, the Town of Rolesville did not provide for the collection of white goods.

5.3.6 Yard Waste

Very little yard waste is collected from this rural community. Residents have been informed of the yard waste landfill ban and are expected to comply.

Appendix J

Designated Area:

Wake Forest

This appendix provides demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Wake Forest.

1.0 POPULATION (See Table J-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

According to information submitted by the Town of Wake Forest to the state, 1673.1 tons of solid waste was sent to the North Wake Landfill for the period July 1, 1991 through June 30, 1992. Based on a population estimate of 6,214 from the Town of Wake Forest Planning Dept., this figure equates to approximately 0.2692 tons per person per year or 1.5 pounds per person per day.

2.2 Projections

Solid waste quantity projections were derived from a population projection for 2000 provided by the Wake Forest Planning Dept. The population projection for 2010 is straight-line. Projections assume no quantity reductions resulting from source reduction and recycling (assumes 0.2692 tons/person/yr).

TABLE J-1

Year	Population Projection	Solid Waste Projection (tons)
1992	6,214 (est.)	1673.1 (1992 value)
2000	9,461	2,547
2010	15,640	4,210

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

The Town of Wake Forest provides an in-house solid waste collection service to its residents on a once-weekly basis. Multi-family housing must contract privately.

3.2 Commercial

Commercial collection is provided in-house and through a private contractor. The town will pick up 50% of the disposal cost if the business contracts with them.

4.0 SOLID WASTE DISPOSAL METHOD

All solid waste is sent to the North Wake Landfill.

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

The Town of Wake Forest operates a drop-off recycling program funded through property taxes.

5.2 Types and Quantities of Materials Collected

The Town of Wake Forest Recycling Program accepts green, brown, and clear glass, aluminum cans, and newsprint. *

Material	Quantity (tons)
Mixed Glass	31.6
Aluminum Cans	2.07
Newsprint	149.7
Total	183.37

* Based on information submitted to the state for the period July 1, 1991 through June 30, 1992.

5.3 Management of Materials Regulated by the Special Waste Mgt. Act of 1989

5.3.1 Tires

As of June 30, 1992, the Town of Wake Forest did not provide for the collection of scrap tires.

5.3.2 Used Oil

As of June 30, 1992, the Town of Wake Forest did not provide for the collection of used oil.

5.3.3 Lead-Acid Batteries

As of June 30, 1992, the Town of Wake Forest did not provide for the collection of used lead acid batteries.

5.3.4 Household Hazardous Waste

As of June 30, 1992, the Town of Wake Forest did not provide for the collection of household hazardous waste.

5.3.5 White Goods

As of June 30, 1992, the Town of Wake Forest did not provide for the collection of white goods.

5.3.6 Yard Waste

Brush and limbs are chipped for use as mulch.

Appendix K

Designated Area:

Wendell

This appendix presents demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Wendell.

1.0 POPULATION (See Table K-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

According to information submitted by the Town of Wendell to the state, 4,211 tons of solid waste was sent to the Wilder's Grove Landfill disposal for the period July 1, 1991 through June 30, 1992. Based on a population estimate of 3,130, this figure equates to approximately 1.345 tons per person per year or 7.4 pounds per person per day.

2.2 Projections

The solid waste quantity projections were derived from a rough population estimate for 2000 provided by the Town of Wendell Planning Dept. and assumes no reductions resulting from further source reduction and recycling (assumes 1.345 tons/person/yr). The population projection for 2010 is straight-line.

TABLE K-1

Year	Population Projection	Solid Waste Projection (tons)
1992	3,130 (est.)	4,211 (1992 value)
2000	6,500	8,742
2010	15,248	20,508

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

The Town of Wendell provides a privately-contracted once-weekly solid waste collection service to its residents, who pay a monthly fee to the town.

3.2 Commercial

The Town of Wendell provides a privately contracted twice-weekly solid waste collection service to businesses, which pay a monthly fee to the town.

4.0 SOLID WASTE DISPOSAL METHOD

All solid waste is sent to the Wilder's Grove Landfill for disposal.

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

The Town of Wendell provides a drop-off recycling program funded through property taxes.

5.2 Types and Quantities of Materials Collected

The Town of Wendell recycling program accepts green, brown, and clear glass, PETE and HDPE plastic, aluminum cans, and mixed paper. *

Material	Quantity
Mixed Glass	14.49
Mixed Plastic	n/a
Aluminum Cans	1.35
Mixed Paper	83.36
Total	99.20

* Based on information provided to the state for the period July 1, 1991 through June 30, 1992.

5.3 Management of Materials Regulated by the Special Waste Mgt. Act of 1989

5.3.1 Tires

As of June 30, 1992, the Town of Wendell did not provide for the collection of scrap tires.

5.3.2 Used Oil

As of June 30, 1992, the Town of Wendell did not provide for the collection of used oil.

5.3.3 Lead-Acid Batteries

As of June 30, 1992, the Town of Wendell did not provide for the collection of used lead-acid batteries.

5.3.4 Household Hazardous Waste

As of June 30, 1992, the Town of Wendell did not provide for the collection of household hazardous waste.

5.3.5 White Goods

As of June 30, 1992, the Town of Wendell did not provide for the collection of white goods.

5.3.6 Yard Waste

Currently much of the yard waste is being handled by the town via chipping and the street vacuuming program. Educational programs are in place to help residents comply with the ban.

Appendix L

Designated Area:

Zebulon

This appendix provides demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Zebulon.

1.0 POPULATION (See Table L-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

According to information submitted by the Town of Zebulon to the state, an estimated 1,320 tons of solid waste was sent to the Wilder's Grove Landfill for the period July 1, 1991 through June 30, 1992. Based on a population estimate of 3,212, this figure equates to approximately 0.4109 tons per person per year or 2.3 pounds per person per day.

2.2 Projections

The solid waste quantity projections below were derived from a population projection for 2000 provided by the Town of Zebulon Planning Dept., and assume no quantity reductions resulting from further source reduction and recycling (assumes 0.4109 tons /person/yr). The population projection for 2010 is straight-line.

TABLE L-1

Year	Population Projection	Solid Waste Projection (tons)
1992	3,212 (est.)	1,320 (1992 value)
2000	4,827	1,984
2010	7,86	13,231

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

The Town of Zebulon provides a once-weekly privately contracted solid waste collection service for its residents, who pay the town directly.

3.2 Commercial

Commercial businesses must privately contract for solid waste collection.

4.0 SOLID WASTE DISPOSAL METHOD

All solid waste is sent to the Wilder's Grove Landfill for disposal.

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

The Town of Zebulon is served by a once-weekly privately contracted curbside recycling program.

5.2 Types and Quantities of Materials Collected

The Town of Zebulon's Recycling program accepts green, brown, and clear glass, PETE and HDPE plastic, aluminum cans, steel cans, and newsprint. *

Material	Quantity (tons)
Mixed Glass	25.85
Mixed Plastic	6.82
Aluminum Cans	3.28
Steel Cans	1.22
Newsprint	80.18
Total	117.35

* Based on information submitted to the state for the period July 1, 1991 through June 30, 1992.

5.3 Management of Materials Regulated by the Special Waste Mgt. Act of 1989

5.3.1 Tires

As of June 30, 1992, the Town of Zebulon did not provide for the collection of used tires.

5.3.2 Used Oil

As of June 30, 1992, the Town of Zebulon did not provide for the collection of used oil.

5.3.3 Lead-Acid Batteries

As of June 30, 1992, the Town of Zebulon did not provide for the collection of used lead-acid batteries.

5.3.4 Household Hazardous Waste

As of June 30, 1992, the Town of Zebulon did not provide for the collection of household hazardous waste.

5.3.5 White Goods

The Town of Zebulon provides a household collection service for the collection of white goods.

5.3.6 Yard Waste

Zebulon disposes its yard waste to nurseries, farms, and individuals requesting chips. It plans to continue this practice.

Appendix M

Designated Area:

Unincorporated Areas of Wake County

This appendix provides demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of the unincorporated areas of Wake County.

1.0 POPULATION (See Table M-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

The solid waste generated in the unincorporated areas of Wake County has been unofficially estimated at 138,144.9 tons for the period July 1, 1991 through June 30, 1992. Based on a population estimate of 127,976, this figure equates to approximately 1.0795 tons per person per year or 5.9 pounds per person per day.

2.2 Projections

Solid waste quantity projections were derived from population projections provided by the Wake County GIS. Projections assume no quantity reductions resulting from further source reduction and recycling (assumes 1.0795 tons/person/yr).

TABLE M-1

Year	Population Projection	Solid Waste Projection (tons)
1992	127,976 (est)	138,144.9 (1992 estimate)
2000		
2010		

Appendix N

Designated Area:

Wake County

This appendix provides demographic and solid waste management information (as provided in the annual solid waste report submitted to the Solid Waste Section of the N.C. DEHNR) for the proposed designated geographic area of Wake County.

1.0 POPULATION (See Table N-1)

2.0 SOLID WASTE QUANTITIES

2.1 Current Quantities

An estimated 502,287 tons of solid waste was generated by Wake County for the period July 1, 1991 through June 30, 1992. Based on a Wake County GIS population estimate of 442,803, this figure equates to approximately 1.13433 tons per person per year or 6.2 pounds per person per day.

2.2 Projections

Solid waste quantity projections were derived from population projections provided by the Wake County GIS and assume no quantity reductions resulting from further source reduction and recycling (assumes 1.1469 tons/person/yr).

TABLE N-1

Year	Population Projection	Solid Waste Projection (tons)
1992	442,803 (est)	502,287 (est)
2000	566,362	649,561
2010	668,999	767,275

3.0 SOLID WASTE COLLECTION PRACTICES

3.1 Residential

See individual town appendices

3.2 Commercial

See individual town appendices

4.0 SOLID WASTE DISPOSAL METHOD

See individual town appendices

5.0 RECYCLING AND WASTE REDUCTION

5.1 Current Collection Programs

Wake County provides fifty drop-off sites for the collection of green, brown, and clear glass, PETE and HDPE plastic, aluminum cans, steel cans, "other metals," newsprint, and mixed paper, and "other paper." *

5.2 Types and Quantities of Materials Collected

Material	Quantity (tons)
Green Glass	n/a
Brown Glass	452.78
Clear Glass	n/a
PETE	n/a
HDPE	126.48
Aluminum Cans	45.33
Steel Cans	5.62
Other Metals	443.93
Newsprint	455.32
Mixed Paper	199.51
Other Paper	240.97
Total	1969.94

* Based on information submitted to the state for the period July 1, 1991 through June 30, 1992.

5.3 Management of Materials Regulated by the Special Waste Mgt. Act of 1989.

5.3.1 Tires

The County landfills, as well as the City of Raleigh Landfill, serve as collection sites for the disposal of scrap tires.

5.3.2 Used Oil

Wake County landfills serve as collection sites for the disposal of used oil.

5.3.3 Lead-Acid Batteries

As of June 30, 1992, Wake County did not provide for the collection of used lead-acid batteries.

5.3.4 Household Hazardous Waste

Wake County co-sponsors a collection program with the City of Raleigh on a semi-annual basis.

5.3.5 White Goods

Each Wake County landfill provides a collection site for the disposal of white goods.

**WAKE COUNTY
COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN**

- A CURRENT ASSESSMENT -

**COMPILED FOR THE WAKE COUNTY SOLID
WASTE ADVISORY COMMITTEE**

BY

**COUNTY OF WAKE
COMMUNITY DEVELOPMENT SERVICES
SOLID WASTE MANAGEMENT DIVISION**

JUNE, 1992



TABLE OF CONTENTS

Message to the Solid Waste Advisory Committee..... 3-4

Introduction..... 5

Local Government Responsibilities..... 5

Criteria for Implementation Priorities..... 6

Local Solid Waste Management Goals 6-8

County of Wake Criteria for Implementation Priorities..... 9

A Current Wake County Assessment Relative to Required 10-17
State Solid Waste Goals

Blank form for Municipal Currents Assessments..... 18-25





COUNTY OF WAKE
COMMUNITY DEVELOPMENT SERVICES
SOLID WASTE DIVISION
P.O. Box 550 • RALEIGH, N.C. 27602 • (919) 856-6186

TO: Wake County Solid Waste Advisory Committee
FROM: Phil Carter, Solid Waste Management Director
DATE: June 1, 1992
SUBJECT: Comprehensive Solid Waste Plan - Current Assessment

The North Carolina Solid Waste Management Act of 1989 requires all county governments to provide a comprehensive solid waste management plan. It is the intent of the State to ensure that all local governments comply with the Act and the comprehensive plan is the mechanism that will be used to check for compliance.

The following report is a County of Wake current assessment of solid waste management programs as they relate to the goals set forth by the State in developing a comprehensive plan. Local governments are being required to develop plans that extend at least ten years and that can be updated every two years.

I would ask that all Advisory Committee members read the Wake County Current Assessment and the goals that have been established. Also, at the end of the report is a blank form to be filled out by each municipality to provide their own current assessments of programs within their jurisdictions. The County and municipal assessments will be consolidated and will ultimately serve as the base document or "foundation", if you will, for which an extensive long term solid waste management plan can be developed, approved by the State, and implemented.

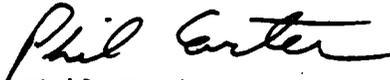
It is my recommendation that each municipality appoint one contact person to provide information to the County when necessary to put the comprehensive plan together. The final rules are now being written by the State and are expected to be published this summer. Twelve months following, the actual Wake County plan must be submitted for approval. The Solid Waste Advisory Committee has

Solid Waste Advisory Committee
June 1, 1992
Page 2

approximately one year to develop this plan.

Once again the current assessment form for municipalities is attached to this document. Please deliver this form to your respective designated municipal contact for completion. Assessments are due at the Wake County Solid Waste Management Division by August 19, 1992. It is very important that municipal reports are received in a timely manner so that the real job at hand-developing a county-wide comprehensive plan - can begin. Thank you for your attention to this matter.

Best regards,



Phil Carter
Solid Waste Director

PC:al

INTRODUCTION

The North Carolina Solid Waste Management Act of 1989 mandates that "each county, either individually or in cooperation with others, shall, in cooperation with the municipalities, develop a comprehensive county solid waste management plan and submit the plan to the Department for approval. County solid waste management plans shall be updated and submitted for approval at least once every two years. A county solid waste management plan shall be consistent with the State's comprehensive solid waste plan."

The required local plan is the mechanism that State government will use to ensure that each county in North Carolina provides for the most economically feasible, cost-effective, and environmentally safe methods of solid waste management available.

LOCAL GOVERNMENT RESPONSIBILITIES

The Act places many new and relatively progressive responsibilities on local governments in North Carolina. On a general basis, the legislation established the following policies which have a direct or indirect impact on local governments.

- ◆ Requirements for planning and implementation by local governments of efficient and environmentally sound programs for the reduction, recycling, and management of wastes including non-hazardous, hazardous, and medical wastes;
- ◆ A recommendation that local governments utilize "reasonably available" means for the promotion of sound solid waste management methods and for recovery of material and energy resources;
- A commitment to promotion of programs for public education and professional training;
- A further expansion of the potential for recycling through market development and recycling industry development efforts;
- ◆ A requirement that all local governments determine and report to waste management system users the "full cost of providing storage, collection, transport, separation, processing, recycling and disposal of solid waste in an environmentally safe manner"; and
- ◆ Provision of incentives to encourage the development of contracts and agreements between local governments, regional organizations and private businesses for management of solid waste.

CRITERIA FOR IMPLEMENTATION PRIORITIES

A great many actions are called for to plan and implement effective local and regional solid waste management programs. It will not be possible for all local governments to achieve all of these goals or implement all of these actions at one time. Consequently, it is necessary to establish priorities so that the most important goals and actions are achieved first and less important ones are implemented when resources are available. Criteria for establishing priorities for implementation should include the following in descending order of importance:

1. Protection of public health and the environment
2. Waste reduction
3. Integrated solid waste management
4. Formalize regional cooperation and shared responsibilities

LOCAL SOLID WASTE MANAGEMENT GOALS

The goals presented in the following section are listed below in the order in which they should appear in a local plan. Local plans are required to describe how these goals will be addressed by the local government.

SECTION ONE -- INTEGRATED SOLID WASTE MANAGEMENT PLANNING

- GOAL 1: To plan for and implement solid waste management systems involving an integrated mixture of program components functioning to handle solid waste in the most efficient way possible, and in a manner which is appropriate in terms of environment, public health, and cost.
- GOAL 2: To develop cooperative strategies to manage the waste within a region in a way that minimizes environmental health hazards, conserves natural resources and energy, and minimizes total costs.
- GOAL 3: To develop, where necessary or efficient, new institutional relationships in order to plan, coordinate, implement and regulate the programs and systems needed for effective solid waste management.
- GOAL 4: To effectively involve the public in integrated solid waste management planning and program development by including the public and addressing public concerns and values at each stage of the decision-making process.

SECTION TWO -- UTILIZING WASTE STREAM CHARACTERIZATION DATA

Goal 5: To gather useful, accurate and appropriate data on the amount and nature of the waste stream as needed to assist in the planning of solid waste management programs and facilities.

SECTION THREE -- COLLECTION, TRANSFER AND DISPOSAL OF WASTE

GOAL 6: To ensure the provision of reasonably convenient, cost-effective and sanitary waste collection service to all residents, businesses and industry in North Carolina, preferably regular household collection from all urban residential customers; household collection or access to staffed convenience centers provided to all rural customers; and adequate collection arrangements available to all local businesses and industry.

GOAL 7: To evaluate the potential for improved waste management through incorporating transfer stations into the integrated waste management system where appropriate.

GOAL 8: To ensure that adequate, environmentally sound disposal capacity is available in the present and ideally for the next ten years.

GOAL 9: To undergo proactive planning, site screening, site selection and design of required new landfill capacity and provide operation of existing facilities that will meet all federal, state and local requirements and reduce the risk of environmental degradation.

GOAL 10: To evaluate the potential for energy recovery from the waste stream and incorporate waste-to-energy technology into integrated waste management planning where appropriate.

GOAL 11: To effectively reduce littering and illegal dumping of solid waste within a local government's jurisdiction.

**SECTION FOUR -- ALTERNATIVES TO DISPOSAL:
SOURCE REDUCTION, REUSE, RECYCLING AND COMPOSTING**

GOAL 12: To reduce the amount of North Carolina's waste requiring disposal through sound management practices and through the development and expansion of recycling, reuse and source reduction opportunities.

GOAL 13: To assess and implement education programs, policies, and incentives which promote source reduction and reuse and discourage waste generation.

GOAL 14: To increase the number and types of recycling services provided to maximize recovery of materials, while minimizing and recycling system costs.

GOAL 15: To effectively manage organic waste materials in an environmentally sound manner which yields a useable product and diverts a significant portion of the waste stream from disposal in MSW facilities.

SECTION FIVE -- PUBLIC EDUCATION AND PROMOTING PARTICIPATION

GOAL 16: Design, develop and implement public information, awareness and education programs designed to increase public awareness of the need for source reduction, recycling and composting; to encourage recycling activities; and to promote environmentally sound and cost-effective integrated solid waste management.

SECTION SIX -- SPECIAL WASTE MANAGEMENT

GOAL 17: To evaluate and establish alternatives for the management of materials which have been banned from landfilling and materials which pose special management problems.

SECTION SEVEN -- ECONOMIC CONSIDERATIONS

GOAL 18: To budget sufficient funds to cover existing and proposed solid waste management programs, including staffing for public education programs, recycling, reduction and composting programs, etc.

GOAL 19: To determine the full costs involved in providing solid waste management services in order to determine how to set equitable rates which pass the cost of services on to the public and provide the basis for enterprise fund development.

SECTION EIGHT -- IMPLEMENTATION ISSUES

GOAL 20: To evaluate the options for assuring availability of the waste stream for optimizing solid waste management capacity utilization.

**A CURRENT ASSESSMENT OF WAKE COUNTY
SOLID WASTE PROGRAMS AND THEIR RELATION
TO THE MANDATED COMPREHENSIVE SOLID WASTE
MANAGEMENT PLAN**

**COUNTY OF WAKE CRITERIA
FOR IMPLEMENTATION PRIORITIES**

1. To effectively and expeditiously enforce local, state, and federal solid waste management regulations.
2. Implement a comprehensive education program in support of Wake County solid waste activities.
3. A 25% reduction of municipal solid waste to be landfilled by June 30, 1993.
4. A 40% reduction of municipal solid waste to be landfilled by June 30, 2001.
5. To ensure the financial long-term security of solid waste disposal facilities by franchising and/or waste flow control ordinances.
6. To maintain at least 20 years of waste disposal capacity at all times.

**A CURRENT WAKE COUNTY ASSESSMENT RELATIVE TO
REQUIRED SOLID WASTE GOALS**

SECTION ONE -- INTEGRATED WASTE MANAGEMENT PLANNING

GOAL 1: To plan for and implement solid waste management systems involving an integrated mixture of program components functioning to handle solid waste in the most effective way possible, and in a manner which is appropriate in terms of environment, public health, and cost.

- ◆ In addition to existing recycling and solid waste disposal programs in Wake County i.e., school recycling, municipal curbside recycling, and sanitary landfilling, Wake County government has begun working with all municipalities through the Wake County Solid Waste Advisory Committee to plan for and implement an integrated solid waste management program to include waste reduction, recycling, composting, possibly waste to energy and landfilling.

GOAL 2: To develop cooperative strategies to manage the waste within a region in a way that minimizes environmental health hazards, conserves natural resources and energy, and minimizes total costs.

- ◆ Wake County currently co-sponsors with the City of Raleigh two household hazardous waste collection days per year.
- ◆ Wake County formed the Wake County Solid Waste Advisory Committee in July of 1990 to develop cooperative solid waste management strategies among all municipal governments and County government.
- ◆ Wake County participates with the Triangle J Council of Governments Solid Waste Committee.
- ◆ Wake County initiated and chairs the Regional Solid Waste Planners Committee that is currently working on regional recycling and marketing efforts as well as regional permanent household hazardous waste facility development.
- ◆ TJ COG has worked with Wake County and other counties to implement a pilot project with the Council for Solid Waste Solutions to recycle many types of plastic containers.

GOAL 3: To develop, where necessary or efficient, new institutional relationships in order to plan, coordinate, implement and regulate the programs and systems needed for effective solid waste management.

- ◆ Wake County has formed an Environmental Network comprised of

meet all federal, state and local requirements and reduce the risk of environmental degradation.

- ◆ The proposed South Wake Sanitary Landfill (470 acres) is currently at the second stage of site application for a new permit to include liners, leachate collection systems, and post-closure sanitary requirements.
- The existing North Wake Sanitary Landfill (150 acres remaining) is currently being redesigned to include all new Federal and State requirements (liners, leachate collection, post-closure monitoring, etc.).

GOAL 10: To evaluate the potential for energy recovery from the waste stream and incorporate waste-to-energy technology into integrated waste management planning where appropriate.

- ◆ Camp, Dresser, and McKee Consulting Engineers performed a preliminary waste-to-energy evaluation for Wake County in 1988 and the recommendations were favorable.
- ◆ Camp, Dresser, and McKee Consulting Engineers are scheduled to begin a detailed feasibility study in October of 1992.

GOAL 11: To effectively reduce littering and illegal dumping of solid waste within a local government's jurisdiction.

- The Wake County Solid Waste Division enforces illegal dumping as a part of the Wake County Solid Waste Ordinance. The County's jurisdiction is in all unincorporated areas. In 1991, the County hired an additional Environmental Inspector to assist the Division in enforcement of a growing number of illegal dumps.
- ◆ Wake County Keep America Beautiful performs the annual Photometric Index Study to determine the amount of roadside littering that occurs. KAB also works with the Solid Waste Division to identify violators and develop solutions for littering as a result of uncovered loads of transported waste.

**SECTION FOUR -- ALTERNATIVES TO DISPOSAL:
SOURCE REDUCTION, REUSE, RECYCLING AND COMPOSTING**

GOAL 12: To reduce the amount of North Carolina's waste requiring disposal through sound management practices and through the development and expansion of recycling, reuse and source reduction opportunities.

- ◆ The Wake County School Recycling Program has recently expanded from 37 to 40 drop-off sites. The Program will cap off at 50 sites in 1993. Materials accepted include: white office and

school paper, aluminum beverage cans, plastic milk jugs and soda bottles, and clear, green, and brown container glass. The News and Observer also provides for newspaper recycling at the high school sites.

- ◆ Wake County maintains 10 recycling drop-off sites at its convenience centers. These sites accept clear, brown and green container glass, aluminum beverage cans, and newspapers. The sites also accept scrap metal.
- ◆ Wake County accepts white goods, scrap tires, and used motor oil at its two landfills.
- ◆ Wake County increased its telephone book recycling sites to 21 in 1992.
- ◆ Wake County maintains extensive in-house office paper recycling programs at numerous County facilities which include the County Courthouse, County Office Building, Health Department, General Services, Field Services, etc.

GOAL 13: To assess and implement education programs, policies, and incentives which promote source reduction and reuse and discourage waste generation.

- ◆ News and Observer Recycling Tips
- ◆ Southern Bell "Real Talk" pages
- ◆ Radio Talk Shows
- ◆ Providing information to the media (newspapers, television, and radio)
- ◆ Speaking engagements
- ◆ Public and Private Waste Reduction and Recycling Task Force
- ◆ Wake County KAB school curriculum and teacher certification program authorized by the Wake County Board of Education
- ◆ A proposed draft solid waste reduction and recycling policy for Wake County Government offices and employees
- ◆ Paint recycling through Household Hazardous Waste Collection Day
- ◆ The creation of the "Recycled Products Guide for Wake County, NC" was a joint effort by the Solid Waste Division and KAB
- ◆ Educational materials provided by the Solid Waste Division, KAB, Soil and Water Conservation, and Cooperative Extension

- ◆ The Wake County Environmental Network Office Vision Directory
- ◆ Wake County's cooperation with other educational groups such as Sun Shares, TJ COG, Regional Solid Waste Planners Committee, Triangle South, National Institute of Environmental Health Science, N.C. State University, UNC-Chapel Hill, Sierra Club, NC Recycling Association, and National Recycling Coalition.

GOAL 14: To increase the number and types of recycling services provided to maximize recovery of materials, while minimizing and recycling system costs.

- ◆ Wake County is currently designing two multi-material drop-off facilities to accept scrap tires, white goods, lead-acid batteries, corrugated cardboard, waste oil, yard waste, and household hazardous waste.
- ◆ Wake County co-sponsors with the City of Raleigh two Household Hazardous Waste Collection days per year and is currently exploring the possibility of the inclusion of permanent facilities.
- ◆ Wake County will increase its School Recycling Program from 40 sites to 50 sites in 1993.
- ◆ Wake County continually researches the viability of relevant recycling technologies and methods.
- ◆ All operational expenditures and capital improvements of solid waste management are taken into account when the solid waste budget is prepared.
- ◆ Wake County maintains detailed records on recycling program revenues, associated-costs for programs, and amounts recycled by material types.

GOAL 15: To effectively manage organic waste materials in an environmentally sound manner which yields a useable product and diverts a significant portion of the waste stream from disposal in MSW facilities.

- ◆ The Wake County Solid Waste Advisory Committee has produced a Model Yard Waste Collection Ordinance that can be used by any Wake County municipality that desires to do so.
- ◆ Wake County promotes and provides education for backyard composting through the Solid Waste Division, KAB, and Cooperative Extension.
- ◆ A large State-approved yard waste management facility has begun operation near the Feltonville Sanitary Landfill.

- ◆ Wake County has designed and is preparing to build a yard waste transfer station at its North Wake Sanitary Landfill and will utilize a State-approved yard waste management facility for disposal.
- ◆ Several permitted land-clearing debris (demolition debris) landfills exist in Wake County and are open to the public.

SECTION FIVE -- PUBLIC EDUCATION AND PROMOTING PARTICIPATION

GOAL 16: Design, develop and implement public information, awareness and education programs designed to increase public awareness of the need for source reduction, recycling and composting; to encourage recycling activities; and to promote environmentally sound and cost-effective integrated solid waste management.

- ◆ Wake County educational programs include telephone book recycling, household hazardous waste collection, the school recycling program, state-of-the-art landfills design, and private waste hauler information sessions.
- ◆ The Solid Waste Division recently hired an Education Specialist to develop a comprehensive educational plan that will promote an integrated solid waste management system for Wake County.

SECTION SIX -- SPECIAL WASTE MANAGEMENT

GOAL 17: To evaluate and establish alternatives for the management of materials which have been banned from landfilling and materials which pose special management problems.

- ◆ Wake County maintains a formal State-approved asbestos disposal program at the Feltonville Sanitary Landfill and will accept asbestos that is generated within the County.
- ◆ Wake County co-sponsors with the City of Raleigh two Household Hazardous Waste Collection Days per year.
- ◆ Wake County maintains a scrap tire disposal program, a white goods recycling program, and a waste oil recycling program at each County landfill.
- ◆ Wake County is currently designing a yard waste transfer station at the North Wake Sanitary Landfill.
- ◆ A private company has recently acquired a permit to operate a yard waste management facility near the Feltonville Landfill in southern Wake County.

numerous Wake County departments each having some interest in the environment and/or solid waste management.

- ◆ Wake County has formed a unique relationship with the public school system by locating forty recycling drop-off sites on school campuses throughout Wake County.
- ◆ Wake County works closely with the private sector to implement solid waste management programs (i.e., ten county convenience Centers, forty school recycling sites, the county office paper program, telephone book recycling, the News and Observer newspaper recycling program and the Private and Public Waste Reduction and Recycling Task Force).

GOAL 4: To effectively involve the public in integrated solid waste management planning and program development by including the public and addressing public concerns and values at each stage of the decision-making process.

- ◆ The Wake County Solid Waste Advisory Committee represented by all town and city managers in Wake County as well as the county manager.
- ◆ The Wake County Solid Waste Technical Group comprised of two private waste haulers, two private recyclers, three large corporations, two interested citizens, and the public works directors from all municipalities in Wake County.
- ◆ The Citizens Advisory Committee designated to work with the Solid Waste Advisory Committee as Wake County embarks upon a waste-to-energy detailed feasibility study.
- ◆ The Private and Public Waste Reduction and Recycling Task Force made up of 60 individuals from small businesses, large businesses, industries, institutions, restaurants, multi-family housing/property management, and local and state government.
- ◆ The Wake County Keep America Beautiful Chapter which provides solid waste education in school curriculum and through seminars and special events.

SECTION TWO -- UTILIZING WASTE STREAM CHARACTERIZATION DATA

Goal 5: To gather useful, accurate and appropriate data on the amount and nature of the waste stream as needed to assist in the planning of solid waste management programs and facilities.

- ◆ The 1988 residential and commercial waste stream analysis performed by Camp, Dresser, and McKee Consulting Engineers for the Wake County Solid Waste Study.

- ◆ The 1992 Waste Characterization Study performed by Camp, Dresser, and McKee Consulting Engineers to identify recyclables in the commercial, industrial, and institutional waste stream and also to identify the amount of yard waste being landfilled.

SECTION THREE -- COLLECTION, TRANSFER AND DISPOSAL OF WASTE

GOAL 6: To ensure the provision of reasonably convenient, cost-effective and sanitary waste collection service to all residents, businesses and industry in North Carolina, preferably regular household collection from all urban residential customers; household collection or access to staffed convenience centers provided to all rural customers; and adequate collection arrangements available to all local businesses and industry.

- ◆ The Wake County Convenience Center Program which provides manned drop-off solid waste disposal and recycling services to all County residents at 10 locations throughout Wake County.
- ◆ Wake County requires that specific collection and disposal criteria be met through its waste hauler licensing program and the Wake County Solid Waste Ordinance.
- ◆ 40 school drop-off recycling sites.

GOAL 7: To evaluate the potential for improved waste management through incorporating transfer stations into the integrated waste management system where appropriate.

- ◆ All 10 convenience centers maintain a solid waste compaction unit for solid waste to be disposed of in the sanitary landfill.
- ◆ One yard waste transfer station has been designed for North Wake to assist the County in complying with the yard waste ban of January 1, 1993.

GOAL 8: To ensure that adequate, environmentally sound disposal capacity is available in the present and ideally for the next ten years.

- With the completion of the permitting process expected in 1994 for the additional 470 acres adjoining the existing Feltonville Sanitary Landfill, total disposal capacity for Wake County should be extended to the year 2017 if the 25% waste reduction goal can be met by 1993.

GOAL 9: To undergo proactive planning, site screening, site selection and design of required new landfill capacity and provide operation of existing facilities that will

SECTION SEVEN -- ECONOMIC CONSIDERATIONS

GOAL 18: To budget sufficient funds to cover existing and proposed solid waste management programs, including staffing for public education programs, recycling, reduction and composting programs, etc.

- ◆ 80% of the total solid waste management budget for Wake County is funded by the Solid Waste Enterprise Fund. Public and private waste haulers are charged a per ton disposal fee at both County landfills. The fund pays for Division administrative costs, sanitary landfills operation, County recycling programs, household hazardous waste collection, education and promotion, enforcement, a landfill construction reserve account, a post-closure reserve account, a land purchase reserve account, a recycling reserve account, and an environmental remediation reserve account.

20% of the solid waste budget is provided for by the General Fund and covers the County Convenience Center Program.

GOAL 19: To determine the full costs involved in providing solid waste management services in order to determine how to set equitable rates which pass the cost of services on to the public and provide the basis for enterprise fund development.

- ◆ Wake County retained Camp, Dresser, and McKee Consulting Engineers for the purpose of performing a solid waste rate study and financial analysis. The study, which was published in March of 1991, provides for current full costs in providing solid waste management services and sets forth a five-year projection. The study will be updated annually.

SECTION EIGHT -- IMPLEMENTATION ISSUES

GOAL 20: To evaluate the options for assuring availability of the waste stream for optimizing solid waste management capacity utilization.

- ◆ The Wake County Solid Waste Advisory Committee formed a Solid Waste Franchise Task Group in 1991 to evaluate the need for franchising solid waste collection in Wake County. It was determined that the present form of waste hauler licensing was sufficient for the County's present needs.
- ◆ The Solid Waste Advisory Committee is currently evaluating the need for a joint Raleigh/Wake County waste flow control ordinance to ensure that sufficient solid waste can be provided to fund existing and future disposal facilities.

**WAKE COUNTY COMPREHENSIVE
SOLID WASTE MANAGEMENT PLAN**

**- A CURRENT MUNICIPAL ASSESSMENT -
FOR**

SUBMITTED BY:

SECTION ONE -- INTEGRATED SOLID WASTE MANAGEMENT PLANNING

GOAL 1: To plan for the implement solid waste management systems involving an integrated mixture of program components functioning to handle solid waste in the most efficient way possible, and in a manner which is appropriate in terms of environment, public health, and cost.

GOAL 2: To develop cooperative strategies to manage the waste within a region in a way that minimizes environmental health hazards, conserves natural resources and energy, and minimizes total costs.

GOAL 3: To develop, where necessary or efficient, new institutional relationships in order to plan, coordinate, implement and regulate the programs and systems needed for effective solid waste management.

GOAL 4: To effectively involve the public in integrated solid waste management planning and program development by including the public and addressing public concerns and values at each stage of the decision-making process.

SECTION TWO -- UTILIZING WASTE STREAM CHARACTERIZATION DATA

Goal 5: To gather useful, accurate and appropriate data on the amount and nature of the waste stream as needed to assist in the planning of solid waste management programs and facilities.

SECTION THREE -- COLLECTION, TRANSFER AND DISPOSAL OF WASTE

GOAL 6: To ensure the provision of reasonably convenient, cost-effective and sanitary waste collection service to all residents, businesses and industry in North Carolina, preferably regular household collection from all urban residential customers; household collection or access to staffed convenience centers provided to all rural customers; and adequate collection arrangements available to all local businesses and industry.

GOAL 7: To evaluate the potential for improved waste management through incorporating transfer station into the integrated waste management system where appropriate.

GOAL 8: To ensure that adequate, environmentally sound disposal capacity is available in the present and ideally for the next ten years. (if applicable)

GOAL 9: To undergo proactive planning, site screening, site selection and design of required new landfill capacity and provide operation of existing facilities that will meet all federal, state and local requirements and reduce the risk of environmental degradation. (if applicable)

GOAL 10: To evaluate the potential for energy recovery from the waste stream and incorporate waste-to-energy technology into integrated waste management planning where appropriate. (if applicable)

GOAL 11: To effectively reduce littering and illegal dumping of solid waste within a local government's jurisdiction.

**SECTION FOUR -- ALTERNATIVES TO DISPOSAL:
SOURCE REDUCTION, REUSE, RECYCLING AND COMPOSTING**

GOAL 12: To reduce the amount of North Carolina's waste requiring disposal through sound management practices and through the development and expansion of recycling, reuse and source reduction opportunities.

GOAL 13: To assess and implement education programs, policies, and incentives which promote source reduction and reuse and discourage waste generation.

GOAL 14: To increase the number and types of recycling services provided to maximize recovery of materials, while minimizing and recycling system costs.

GOAL 15: To effectively manage organic waste materials in an environmentally sound manner which yields a useable product and diverts a significant portion of the waste stream from disposal in MSW facilities.

SECTION FIVE -- PUBLIC EDUCATION AND PROMOTING PARTICIPATION

GOAL 16: Design, develop and implement public information, awareness and education programs designed to increase public awareness of the need for source reduction, recycling and composting; to encourage recycling activities; and to promote environmentally sound and cost-effective integrated solid waste management.

SECTION SIX -- SPECIAL WASTE MANAGEMENT

GOAL 17: To evaluate and establish alternatives for the management of materials which have been banned from landfilling and materials which pose special management problems.

SECTION SEVEN -- ECONOMIC CONSIDERATIONS

GOAL 18: To budget sufficient funds to cover existing and proposed solid waste management programs, including staffing for public education programs, recycling, reduction and composting programs, etc.

GOAL 19: To determine the full costs involved in providing solid waste management services in order to determine how to set equitable rates which pass the cost of services on to the public and provide the basis for enterprise fund development.

SECTION EIGHT -- IMPLEMENTATION ISSUES

GOAL 20: To evaluate the options for assuring availability of the waste stream for optimizing solid waste management capacity utilization.

* All Municipal Assessments Are Due August 19, 1992.
Please Return your completed form to:

Wake County Solid Waste Management Division
ATTN: Phil Carter, Director
P.O. Box 550
Raleigh, NC 27602

If you have questions or comments regarding your current assessment or the Wake County comprehensive solid waste management plan, please contact Phil Carter at (919) 856-6835/6186.



COUNTY OF WAKE
RALEIGH, NORTH CAROLINA

COMMUNITY DEVELOPMENT SERVICES
ADMINISTRATION

MARCH 23, 1993

MEMORANDUM

TO: Solid Waste Advisory Committee

FROM: CII Sub Committee
Douglas Longhini, Charlie Horne, Carolyn Carter

RE: Revised CII Matrix and Action Plan

The attached action plan has been revised according to your comments. We present it for your approval and to be forwarded on to your elected boards for action where necessary.

Note the Sub Committee also recommends that the SWAC review the CII report in 1995-96 to determine if additional actions are necessary.

Attachments: CII Matrix
CII Action Plan

b:ppwaste.act/doug



PRIVATE AND PUBLIC WASTE REDUCTION AND RECYCLING ACTION PLAN

(XX Represents the Lead Agency)

Action Items

Responsible Party *

	WC	MG	WH	WG	SWAC
EDUCATION					
Clearing House - Central point or points where solid waste information can be obtained.	X	X	X		
In House Recycling and Waste Reduction - Special program or instructional outlines for different types of CII Groups to aid in waste reduction.	X	X	X	X	
Loaned Executive (United Way Method) - Individuals who are knowledgeable on methods of waste reduction for special types of CII Groups who will assist in setting up programs or making presentations.	X	X		X	
Public Information Materials.	X	X	X	X	
School Curriculum (All Levels) - Standard solid waste education program for all groups K-12 in the N.C. Education System (Public & Private) in Wake Co.	X		X		X
Seminars - Method of conveying information on solid waste programs or requirements.	XX			X	
Speakers Bureau- Individuals who are knowledgeable of solid waste programs and willing to make presentations to interested groups.	XX	X	X	X	

- * WC - Wake County
- WG - Waste Generator
- SWAC - Solid Waste Advisory Committee
- XX - The lead agency is defined as the Group which should take the first step in carrying out the action plan item.
- WH - Waste Hauler
- MG - Municipal Government

PRIVATE AND PUBLIC WASTE REDUCTION AND RECYCLING ACTION PLAN

(XX Represents the Lead Agency)

Action Items

Responsible Party *

	WC	MG	WH	WG	SWAC
EDUCATION					
Special Waste Education - Specialized information on disposal/reduction of waste not allowed in sanitary landfills in N.C.	X	X	X	X	
Visual Information Programs.	X	X	X	X	
Waste Audit - Formal procedures on reviewing the types and quantities of waste generated in a CII setting which will help eliminate or reduce that waste.	X	X	X	X	XX
LEGISLATION					
Container Reuse - Consider legislation that requires the reuse of containers where possible to reduce the waste stream.	X	X			XX
Count Waste To Energy As Reduction - Any waste that is incinerated and produces energy would count toward the ultimate 2001 40% reduction goal.	X	X			XX
Food Waste Reuse + Composting - Rules that dictate how leftover foods or food scraps must be treated, handled or disposed of.	X			X	XX
N.C. Fire + Health Codes - N.C. Codes that dictate the sanitary treatment of waste products to prevent disease and dictate how materials must be handled or stored in a CII setting to prevent fires.	X	X			XX
On Site Recycling for Multi Family - Consider requiring property owners/managers to provide adequate on-site recycling facilities for all tenants.					XX

PRIVATE AND PUBLIC WASTE REDUCTION AND RECYCLING ACTION PLAN

(XX Represents the Lead Agency)

Responsible Party *

Action Items

	WC	MG	WH	WG	SWAC
LEGISLATION					
Recyclable Corrugated Cardboard Surcharges - Monetary program to reduce or eliminate this particular type of waste.	X	X			XX
Recycling-Reduction Procurement Policy - Consider formal written policy outlining source reduction/recycling and purchasing programs.	X	X	X	X	XX
Strengthen Markets - Consider through the legislative goals program encouraging passage of legislation that would require reduced packaging, recycled contents, encourage local end-user markets, require advance disposal fees for special wastes, etc.	X	X			XX
Stronger Laws on Illegal Dumping - Consider through legislative goals program encouraging passage of legislation that creates stronger deterrents for illegal dumping.	X	X			XX
Zoning Code - Consider reviewing and revising zoning ordinances to ensure they do not inhibit or prevent CII waste reduction efforts.	X	X			XX
PROGRAM IMPLEMENTATION					
Composting - Diversion and processing of wood and vegetative waste for the purpose of creating soil amendment.	X	X	X	X	
Corrugated Cardboard Recycling - Program targeting recyclable corrugated cardboard for diversion from sanitary landfills.	X	X	X	X	

PRIVATE AND PUBLIC WASTE REDUCTION AND RECYCLING ACTION PLAN

(XX Represents the Lead Agency)

Action Items

Responsible Party *

	WC	MG	WH	WG	SWAC
PROGRAM IMPLEMENTATION					
Drop Offs to Serve Small Business - Consider modification of existing drop-off recycling sites previously designated for residential use only and development of new sites to further accommodate those businesses not targeted by existing programs.	X	X	X		
Fee Based Collection and Disposal - (No Ad Valorem Subsidy) Consider eliminating government subsidization of solid waste collecting and disposal, CIIs will pay the true cost of solid waste management.	X	X			
Food Waste Composting - Consider diversion of food waste for the purpose of composting or re-use as animal feed.	X	X	X	X	XX
Illegal Dumping/Stronger Enforcement - Consider providing for additional inspectors to enforce stronger local ordinances addressing illegal dumping.	X	X			
Incineration - Assess the viability of waste-to-energy as a component of an integrated solid waste management approach.	XX	X			X
Promote Waste Related Entrepreneurship - Explore avenues to create an entrepreneurial spirit for waste reduction initiatives.	X	X			
Purchase Recycled Products - Draft and implement written procedures to encourage purchase of materials that are recyclable or have recycled content.	X	X	X	X	

PRIVATE AND PUBLIC WASTE REDUCTION AND RECYCLING ACTION PLAN

(XX Represents the Lead Agency)

Action Items

Responsible Party *

	WC	MG	WH	WG	SWAC
PROGRAM IMPLEMENTATION					
Scrap Metal Recycling - Create programs for the diversion of ferrous and non-ferrous metals for recycling.	X	X	X		
Small Business Collection Routes (Curbside) Consider inclusion of small businesses in residential curbside routes or the creation of special curbside routes targeting small businesses.	X	X	X		
Waste Exchange - Working with the existing Southeastern Waste Exchange to better identify local markets for industrial waste and to encourage participation.				X	
Wood Pallet Recycling - Consider program targeting wood pallets for diversion from sanitary landfills for the purpose of reuse or recycling.	X	X		XX	



**PRIVATE AND PUBLIC WASTE REDUCTION
AND RECYCLING ACTION**

EDUCATION

CLEARING HOUSE

WC

- a. Have a library of all solid waste information items including municipal operations contracts.
- b. Provide a central telephone number for all inquiries
- c. Maintain a listing of all telephone numbers and contact people at different governmental or private waste hauler recycler establishments.

MG

- a. Same as County except on a local basis.

WH

- a. Provide a listing of all their services at one central point.

IN-HOUSE RECYCLING AND WASTE REDUCTION

WC

- a. Develop programs for Wake County government.

MG

- a. Develop programs for individual municipal jurisdiction.

WH

- a. Distribute appropriate audits and assist waste generators.

WG

- a. Conduct appropriate waste audits.
- b. Develop appropriate in-house programs to achieve recycling and waste reductions goals.

LOANED EXECUTIVE

WC

- a. Maintain listing of any loaned executive and appropriate CII sector that the individual would work in.
- b. Provide training program on basic County disposal and municipal/private collection process.

WG

- a. Make available individuals who are trained and interested to assist other like businesses in reaching their waste reduction/recycling goals.

**PUBLIC INFORMATION MATERIALS
DIRECT MAILING**

WC

- a. Use this distribution method for appropriate County-wide programs.
- b. Check to make sure that local jurisdictions are distributing information that is consistent with County landfill policy or ordinances.

MG

- a. Use as appropriate.

WH

- a. Use as appropriate.

FLYERS

WC

- a. Use this distribution method for appropriate County-wide programs.
- b. Check to make sure that local jurisdictions are distributing information that is consistent with County landfill policy or ordinances.

MG

- a. Use as appropriate.

WH

- a. Use as appropriate.

NEWS LETTERS/TRADE JOURNALS

WC

- a. Establish regular section in any publication distributed by the County that will deal with the solid waste issues appropriate for that particular time period.

MG

- a. Establish regular section in any publication distributed by the municipalities that will deal with the solid waste issues appropriate for that particular time period.

WH

- a. Establish regular section in any publication that will deal with the solid waste issues appropriate for that particular time period.

WG

- a. Establish regular section in any publication that will deal with the solid waste issues appropriate for that particular time period.
- b. Use these communication methods to solicit feed back from effected program operators and to obtain suggestions.

UTILITY BILLS/MAILINGS

MG

- a. Use brief paragraph or information flyers as a portion of the monthly utility bills to encourage participation in, announce or otherwise advertise solid waste issues.

SCHOOL CURRICULUM

SWAC

- a. Review and endorse any school curriculum prior to it being recommended to the local school systems (public and private).

WC

- a. Working through the KAB program establishing their curriculum in each of the grade K-12.
- b. Provide appropriate funding source whether it be tax supported or private contributions to provide curriculum materials packages to each school in Wake County.
- c. To make available to all schools in Wake County appropriate listings of individuals who may assist in conducting the school curricula.
- d. Provide open access to waste handling facilities so that the curricula may be taught on-site.

MG

- a. Provide support to the education system through individual solid waste staff or contractors. Make these individuals available to present curricula material.

WH

- a. Provide access to waste handling facilities so that first hand knowledge can be obtained by students.
- b. Support of education efforts that may be ongoing or developed.

SEMINARS

WC

- a. Sponsor major topical seminars on waste management on at least a annual basis.

WG

- a. Encourage active participation in the seminar so that current information may be obtained by all parties responsible for initial waste generation.

SPEAKERS BUREAU

WC

- a. Develop listing of all appropriate topics that could be covered by a Speakers Bureau.
- b. Maintain up-to-date listing of individuals available for Speakers Bureau.
- c. Provide an open avenue of communications so that duplications are not made by having more than one representative at any given speaking engagement.

MG

- a. Provide specialty speakers

WH

- a. Provide specialty speakers.

WG

- a. Provide specialty speakers.

SPECIAL WASTE EDUCATION

WC

- a. Select special wastes as outlined under the Solid Waste Management Act and concentrate on individual waste items to give as full coverage as possible to all affected CII agencies.
- b. Accomplish this through appropriate media releases, informational brochures, etc.

MG

- a. Participate in distribution of the information.

WH

- a. Participation in distribution of the information.

WG

- a. Set up appropriate in-house training sessions to review information on waste they are generating within their organizations and options for disposal.

**VISUAL INFORMATION PROGRAMS
EXHIBITS**

WC

- a. Establish visual displays that demonstrate overall County programs including landfilling, or other types of waste disposal.

MG

- a. Develop displays showing collection methods and any local ordinances requirements.

WH

- a. Show methods for their collection programs and any recycling efforts.

WG

- a. Develop displays that show methods of waste reduction including proper recycling and disposal methods.

MEDIA SPOTS

WC

- a. Develop appropriate spots and work with County-wide television and radio communications to distribute general information on County-wide waste disposal programs.

MG

- a. Develop appropriate spots on specifics for individual municipalities.

VIDEO

WC

- a. Production of any videos that would be of general information on solid waste programs.
- b. Attempt to see that these video receive prime time viewing if they are to be use on a commercial television.
- c. Make copies of these videos or public service announcements available to all jurisdictions for their use.

MG

- a. Produce videos specific to the individual jurisdictions programs.

WH

- a. Produce videos specific to programs operated by the individual hauler.

WG

- a. Production of videos specific to waste reduction and recycling of that particular CII agency.
- b. Assist County and municipalities in production of their videos emphasizing consistency in information provided.

WASTE AUDIT

SWAC

- a. Through the Solid Waste Advisory Committee and Technical Committee the production of model waste audits to be used by CII Groups.

WC

- a. Act as a reference source for conducting waste audits.
- b. Provide staffing for technical assistance to CII agencies and conducting waste audits.
- c. Provide training for individuals to perform waste audits.
- d. Provide assistance to waste generators in follow up on waste audits to attempt to accomplish reduction in recycling goals.

MG

- a. Work with local CII agencies and encourage them to conduct waste audits.
- b. Participate in any training session for individuals who may conduct waste audits.
- c. If possible physically conduct waste audits with CII agencies.

WH

- a. Conduct waste audits as a portion of their collection service.

WG

- a. Set up internal teams to conduct waste audits.
- b. Follow through on waste audit results to accomplish potential elimination or reduction goals.

LEGISLATION

CONTAINER REUSE

SWAC

- a. Through the Solid Waste Technical Committee research the present legislative proposals and make appropriate recommendations to be considered by all local units of government.

WC

- a. Take appropriate recommendations to the North Carolina Association of County Commissioners and League of Municipalities for inclusion in a legislative packet.

MG

- a. Take appropriate recommendations to the North Carolina Association of County Commissioners and League of Municipalities for inclusion in a legislative packet.

COUNT WASTE TO ENERGY AS REDUCTION

SWAC

- a. Through the Solid Waste Advisory Committee draw appropriate legislative package to be considered by local governments.

WC

- a. Endorse legislation and forwarded to County Commissioners Association and League of Municipalities for support by the State.

MC

- a. Endorse legislation and forwarded to County Commissioners Association and League of Municipalities for support by the State.

FOOD WASTE REUSE AND COMPOSTING

SWAC

- a. Through the Solid Waste Technical Committee identify the specific issues that prevent this type of activity from taking place.

WC

- a. Consider changes in existing codes to make these programs possible.

WG

- a. Support the County in its efforts to have legislative changes made.

N.C. FIRE AND HEALTH CODES

FIRE CODE

SWAC

- a: Through the Solid Waste Advisory Committee research the fire code to identify areas that are a hindrance to potential recycling and waste reduction.

WC

- a. Cooperatively with the Fire Marshall's office determine what items can be changed or adjusted to meet the intent of the fire codes.
- b. Draw an appropriate legislative package and take to the North Carolina Codes Council for changes in the State Fire Code.

MG

- a. Support Wake County in its efforts for fire code changes.

HEALTH CODE

SWAC

- a. Through the Solid Waste Technical Committee research the health code to identify areas that are a hindrance to potential recycling and waste reduction.

WC

- a. Cooperatively with the Health Department determine what items can be changed or adjusted to meet the intent of the health codes.
- b. Draw an appropriate legislative package and take to the Legislature for changes in the State Health Code.

MG

- a. Support Wake County in this effort.

ON SITE RECYCLING FOR MULTI-FAMILY

SWAC

- a. Review need for additional legislation to assist in on-site, multi-family recycling.

RECYCLABLE CARDBOARD SURCHARGE PROGRAM

SWAC

- a. In FY 95 review the results of the surcharge program and determine if there is a need for additional surcharges, bans, etc.

WC

- a. Establish a surcharge program for this product at the Wake County landfills.

MG

- a. With the assistance of the Solid Waste Advisory Committee research the Municipal Solid Waste Ordinance and insure that appropriate permissive legislation is in place to be able to levy fines, penalties, surcharges or bans within that Ordinance.

RECYCLING-REDUCTION PROCUREMENT POLICY

SWAC

- a. Draw a model policy to be adopted by all jurisdictions.

WC

- a. Adopt and implement a formal written procurement policy.

MG

- a. Same as County except on a local basis.

WH

- a. Same as County except on a corporate level.

WG

- a. Same as County except on a corporate level.

STRENGTHEN MARKETS

SWAC

- a. Consider legislative goals through the Solid Waste Advisory Committee that emphasize recycled product content, encourage local end-user markets, require advance disposal fees, etc.

WC

- a. Endorse legislation and forward to County Commissioners Association and League of Municipalities for support by the State.

MG

- a. Same as County.

STRONGER LAW ON ILLEGAL DUMPING

SWAC

- a. Develop legislative goals through the Solid Waste Technical Committee that create stronger deterrents for illegal dumping.

WC

- a. Endorse legislation and forward to the County Commissioners Association and League of Municipalities for support by the State.

MG

- a. Same as County.

ZONING CODE

SWAC

- a. Utilize the Solid Waste Technical Group to research and identify zoning ordinance provisions that restrict waste reduction and recycling efforts of CIIIs.

WC

- a. Work with the Planning Department, Solid Waste Division, Fire Marshall, Land Use, Building Inspections, and the Health Department to modify or change restrictive ordinances.
- b. Utilize the Environmental Network as the coordinating agency.

MG

- a. Same as the County except on a local level.
- b. Same as the County except on a local level.

PROGRAM IMPLEMENTATION

COMPOSTING

WC

- a. Maintain a yard waste transfer station at North Wake Sanitary Landfill for residential and CII use to be transported to an appropriate yard waste management facility.
- b. Encourage and promote private sector yard waste management services.
- c. Provide the public with an updated list of facilities that can be utilized in Wake County.
- d. Promote Cooperative Extension Service Home Composting Program.

MG

- a. Provide for adequate collection services for yard waste that ensure materials are separate from regular trash.
- b. Provide appropriate yard waste management facilities if applicable.
- c. Provide yard waste composting education.

WH

- a. Provide separate collection services for yard waste through municipal contracts and upon request by individual customers.
- b. Distribute company, county, and municipal literature to customers.

WG

- a. Implement at home program with the help of the Cooperative Extension Service.

CORRUGATED CARDBOARD RECYCLING

WC

- a. Enact a recyclable corrugated cardboard ordinance that surcharges waste loads at the landfill. Provide for enforcement at the landfill.
- b. Provide education to local CIIs through direct mailouts, trade association meetings, TV and radio PSAs, town council meetings, and company newsletters.

- c. Conduct an updated waste characterization study to evaluate success of corrugated efforts in 1995.

MG

- a. Adopt a resolution in support of Recyclable Corrugated Cardboard Ordinance.
- b. Assist businesses in providing education at a local level by designating a MG employee as a CII coordinator.

WH

- a. Provide CII sector with collection services for recyclable corrugated cardboard.
- b. Provide adequate education for all customers regarding corrugated cardboard.
- c. Provide waste audits for customers.

DROP-OFFS TO SERVE SMALL BUSINESS

WC

- a. Utilize existing convenience centers to install corrugated compactors for residents and small businesses.
- b. Build two large corrugated baling facilities, one at each County landfill.
- c. Promote the use of the Wake County Igloo Program for small business in-house programs.

MG

- a. Consider "community" drop-off sites for small businesses.
- b. Encourage the use of County-operated drop-off facilities by CIIs.

WH

- a. Consider containers and collection services for CII drop-off sites.
- b. Encourage the use of drop-off sites as an alternative.

FEE BASED COLLECTION AND DISPOSAL (NO AD VALOREM SUBSIDY)

WC

- a. Consider encouraging municipalities to end government subsidies of collection and disposal so that the State-mandated full-cost accounting of solid waste management in Wake County is achieved.

MG

- a. Consider establishing enterprise funds which would require CIIs to pay the full cost of collection and disposal.

FOOD WASTE COMPOSTING

SWAC

- a. Research the technology and potential viability of food waste composting and/or as re-use as animal feed.

WC

- a. Sponsor a pilot study involving the Solid Waste Division, Cooperative Extension Service, N.C. State, and local restaurants.

MG

- a. Consider co-sponsoring a pilot study.

WH

- a. Consider providing for separate containers and collection of food waste at restaurants and institutions.

WG

- a. Cooperate with Wake County and municipal governments in implementing a pilot study.
- b. Consider separating food waste for separate collections.

ILLEGAL DUMPING, STRONGER ENFORCEMENT

WC

- a. Consider hiring two additional environmental inspectors by Fiscal Year 1994-95.
- b. Rewrite local solid waste ordinances to include maximum penalties allowed by the Solid Waste Management Act of 1989.
- c. Encourage the appointment of an Environmental Judge and the assignment of an assistant district attorney to handle all environmental cases.
- d. Consider adding an environmental lawyer to the County Attorney's staff.

MG

- a. Rewrite local solid waste ordinances to include maximum penalties allowed by the Solid Waste Management Act of 1989.
- b. Provide for sufficient local enforcement personnel.

INCINERATION

SWAC

- a. Review and comment on the CDM study making a recommendation to all municipalities and the County.

WC

- a. Retain Camp Dresser and McKee to perform a Waste-to-Energy Detailed Feasibility Study.

- b. Consider other waste-to-energy proposals that currently exist in the region.
- c. Working through the Solid Waste Advisory Committee appoint a Citizen's Task Force to oversee the CDM study.
- d. Assess the need for and if appropriate consider enacting a waste flow control ordinance for Wake County.

MG

- a. Appoint local representatives to serve on the Waste-to-Energy Citizen's Task Force.
- b. Utilizing the Solid Waste Advisory Committee evaluate the CDM study.

PROMOTE WASTE RELATED ENTREPRENEURSHIP

WC

- a. Enter into public/private partnerships that would provide education, services, and new opportunities especially for those CIIs unable to establish typical collection programs.
- b. Hold public meetings to inform interested entrepreneurs of new and upcoming solid waste legislation that could create the need for new services.
- c. Create an environment that would encourage private sector involvement in solid waste issues instead of public sector involvement.

MG

- a. Same as County except at a local level.

PURCHASE RECYCLED PRODUCTS

WC

- a. Consider adopting a resolution giving special consideration to the purchase of materials that are recyclable or have recycled content.
- b. Work with the Purchasing Agent to identify specific products.
- c. Educate employees that are authorized to make purchases.

MG

- a. Same as County.

WH

- a. Same as County.

WG

- a. Same as County.

SCRAP METAL RECYCLING

WC

- a. Continue to make available convenience centers for scrap metal recycling.
- b. Include lead-acid battery recycling at the two Multi-Material Drop-off Facilities at North and South Wake.
- c. Continue to maintain two white goods recycling programs at the landfills.
- d. Work with construction companies to encourage scrap metal separation.

MG

- a. Consider providing for local scrap metal drop-off recycling opportunities.

WH

- a. Consider providing collection services for scrap metal recycling.
- b. Encourage industrial customers to separate recyclable scrap metal.

SMALL BUSINESS COLLECTION ROUTES (CURBSIDE)

WC

- a. Identify methods in which small businesses in unincorporated areas may receive curbside collection of recyclables if other methods are not feasible.
- b. Consider ordinance changes to require recycling collection services be provided by all licensed haulers in Wake County.

MG

- a. Consider inclusion of small business in residential curbside routes or the creation of special curbside routes targeting small business.

WH

- a. If enacted by the County, waste haulers would be required to provide small business collection routes as a part of the licensing requirements in Wake County.

WASTE EXCHANGE

WG

- a. Become familiar and work with the existing Southeastern Waste Exchange or sponsor the creation of a new local waste exchange to identify the "special wastes" that are generated in Wake County.
- b. Provide "loaned executives" to investigate and promote in-county and out-of-county networking of industries that produce special industrial wastes that may be re-usable or recyclable.

WOOD PALLET RECYCLING

WC

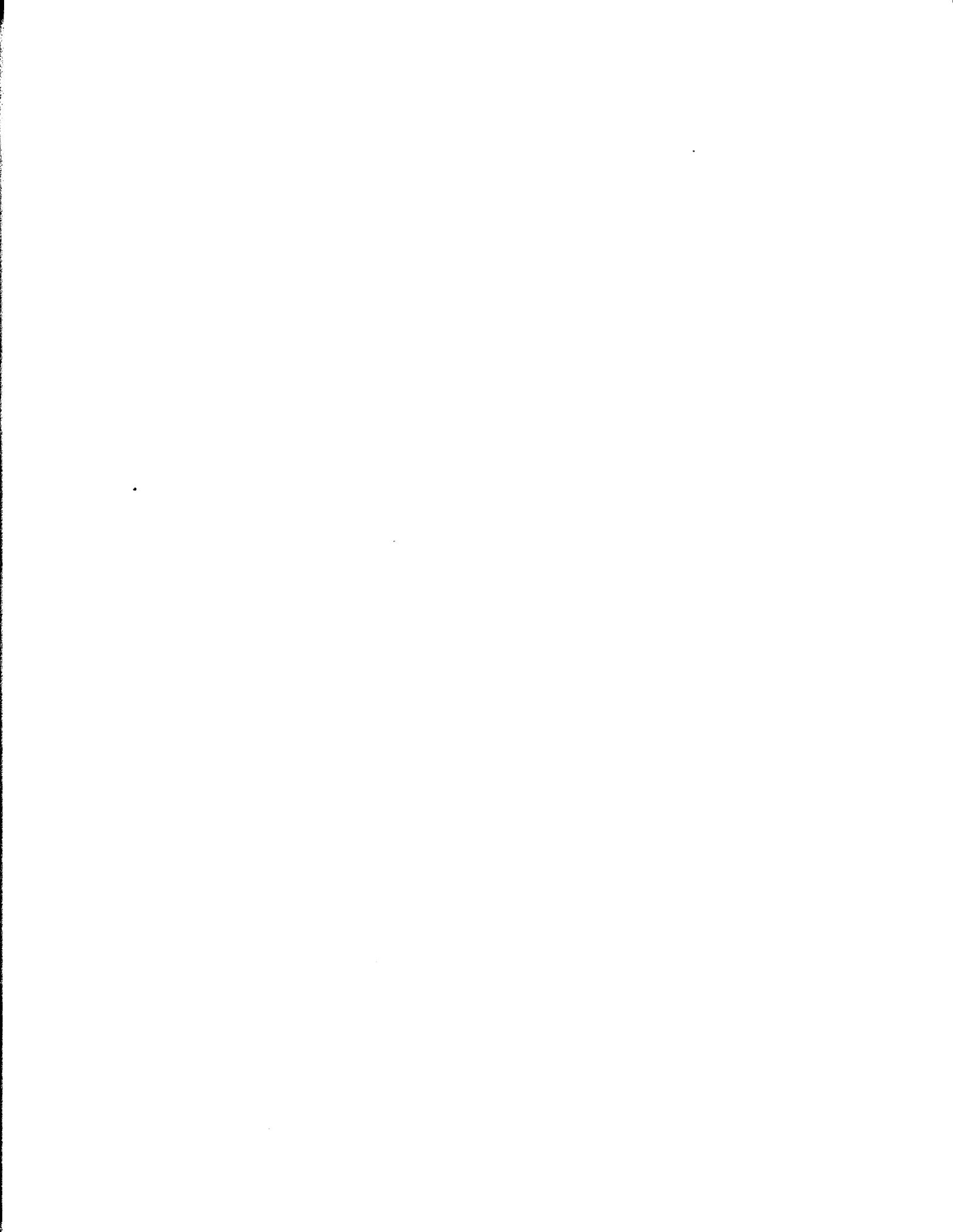
- a. Encourage construction companies and other industries to re-use or recycle pallets at yard waste management facilities.
- b. Consider diverting wood pallets from sanitary landfills to varied waste processing facilities.

MG

- a. Encourage construction companies and other industries to re-use or recycle pallets at yard waste management facilities.

WG

- a. Separate and recycle or re-use wood pallets



TRIANGLE RECYCLING RESOURCE GUIDE

WAKE COUNTY

Prepared by

William D. Willis

EAAC

Prepared for

Environmental Awareness Advisory Committee (EAAC)

National Institute of Environmental Health Sciences
PO Box 12233, Research Triangle Park, North Carolina 27709

2nd Edition
Revised April 1992

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INTRODUCTION

Wake County, NC, is located southeast of the Research Triangle Park and includes the communities of Apex, Auburn, Bonsal, Cary, Eagle Rock, Fuquay-Varina, Garner, Holly Spring, Knightdale, Lizard Lick, Morrisville, Nelson, Neuse, Newhill, Raleigh, Rolesville, Wakefield, Wake Forest, Wendell, Willow Springs, Zebulon, and the southern part of the Research Triangle Park.

This section provides recycling information for Wake County, as well as State, Federal, and private recycling contacts. Each County section is organized as follows:

	Page
Recycling Contacts	
City & County	1
State	4
Federal	5
Private	5
Drop-off Sites	
Aluminum and Multi-materials	9
Automobiles - Scrap/junk	15
Bags - Paper or plastic	16
Batteries - Household	17
Batteries - Lead-acid	17
Books - Used	18
Cans - Steel/Bimetal Beverage.	18
Cans - Steel/tin food	18
Cardboard - Corrugated	19
Cards - Christmas and Greeting.	20
Cartridge - Laser and Printer	20
Christmas Trees	21
Christmas Trees - Reefs	21
Coat Hangers.	22
Composting	23
Glass	23
Household Hazardous Waste.	24
Leaves	24
Limbs and Brush	25
Magazines	25
Metals - Scrap	26
Newspapers.	27
Oil - Motor	28
Paint - Waste	29
Paper (various).	29
Pesticides	30

Plastic - HDPE (Milk & Soda)	31
Plastic - HDPE (other).	31
Plastic - LDPE rings	32
Plastic - PS peanuts	33
Telephone Books	34
Tires.	35
White Goods/Appliances - Scrap.	36
White Goods/Appliances - Used	36
Other Materials (miscellaneous)	37
 Nonprofit Recyclers	 37
 Organizations Accepting Usable Items	
General Items	38
Eye Glasses	41
Other	42
 Curbside Recycling Programs	
Basic Service	42
Christmas Trees	44
Furniture/Furnishings	45
Leaves.	45
Limbs and Brush.	46
Oil - used motor	47
Telephone Books.	47
White Goods/Appliances	48
Yard Waste.	48
 Private/Commercial Recyclers.	 49

See the **Glossary of Recycling Terminology** for definitions of terms often used in recycling. Recycling sections also exist for Chatham, Durham, and Orange Counties. A separate **Material Cross-Reference** section summarizes the drop-off sites and recycling activities in all four counties according to material classification. **Appendices** provide additional lists of resources, products, and information, as listed below:

- I Information Sources and Publications
- II Distributors and Suppliers of Recycled Products
- III Services and Recyclers for Business, Industrial, Institutional,
and Municipal Customers
- IV Recycled-Content Products Available in the Triangle Area (in press)

This is the 2nd Edition of the Triangle Recycling Resource Guide, originally printed January 1991 at the request of the NIEHS Environmental Awareness Advisory Committee (EAAC) by William Willis, Committee Secretary.

The information and listings contained in this guide do not imply NIEHS endorsement. Every effort was made to provide a complete reference list of all available resources in the Research Triangle area. The author acknowledges that some information may have changed, or new sources may have become available since publication. Please refer to the contacts, individual recyclers, and suppliers for the latest information.

Any corrections, deletions, or omissions noted should be brought to the attention of William Willis, Environmental Awareness Advisory Committee, National Institute of Environmental Health Sciences, MD C4-02, PO Box 12233, Research Triangle Park, North Carolina 27709 or by FAX (919) 541-3800. Changes brought to the Committee's attention are appreciated and will be considered for future editions.

Appreciation is extended to all municipal recycling coordinators, area groups, recyclers, and individuals who provided information and suggestions. Special thanks go to my wife Debi and to Dr. E.M. Eddy for their continued support during the preparation and revision of this guide.

Permission is granted to copy and distribute this document or any portion of it to anyone who is interested or could benefit from the information, provided that credit is given and it is provided for free or at cost.

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WAKE COUNTY

RECYCLING CONTACTS

City & County

Apex Public Works Department, Upchurch St, Apex NC 27502 (919) 362-8166
Larry P. Thomas, Public Works Director
Information on the Apex Municipal Works Compound, oil recycling, curbside pickup, mulch, and leaf collection.

Apex Town Hall, 205 Saunders St, PO Box 250, Apex, NC 27502 (919) 362-8661
Mike Wilson, Assistant Town Manager.
Apex recycling information.

Cary Public Works Department, Streets Division, 316 North Academy St, PO Box 1147, Cary NC 27512 (919) 469-4396 Larry Dempsey
Leaf collection and pickup/delivery.

Cary Recycling Center behind Public Works, 313 North Dixon St, Cary, NC 27511
(919) 469-4092 or 469-4090 Kim Fisher, Public Works Director; Dean Baldwin, Solid Waste Management Supervisor
Recycling and solid waste management.

Cary Recycling Program, Public Works, 313 North Dixon St, Cary, NC 27511
(919) 469-4387 Cheryl Hannah, Recycling Coordinator
Curbside recycling program, school recycling activities, and programs.

Cary Solid Waste Management Advisory Board, Public Works Department, 316 North Academy St, PO Box 1147, Cary NC 27512 (919) 469-4090
Citizen advisory board to the Town of Cary Public Works Department.

Fuquay-Varina, Town Hall, 1300 East Academy St, Fuquay-Varina, NC 27526
(919) 552-1411, T.C. O'Connell, Public Works Director.
Curbside recycling program.

Fuquay-Varina Environmental Strategy Committee, Fuquay-Varina, NC
(919) 552-2242 John Byrns, Chairman
Plans beautification projects, planting, recycling, etc.

Garner Public Works, 610 Rand Mill Rd, Garner, NC (919) 772-7600
Special collections.

Garner, Town of Garner, 900 7th Ave, PO Box 446, Garner, NC 27529
(919) 772-4688 Joe Prater, Administrative Assistant to Town Manager
Curbside recycling program and composting.

Holly Springs, Town of Holly Springs 552-6221/231.
Gerald Holleman, Mayor.

Household Hazardous Wastes Collection, PO Box 590, Raleigh, NC 27602
(919) 890-3605 (message) or Cindy Kling 890-3400
Biennial Household Hazardous Waste Collection Day for citizens of
Wake County (usually in April and November).

Keep America Beautiful (Wake County), PO Box 550, Raleigh, NC 27602
(919) 856-6778/6779
Advisory Board - Joyce Harris (919) 543-4018 and Van Carpenter (919) 790-3354
Business/Industry - Brooke Triplett, Chair (919) 543-5087
Communications - Peggy Allen, Chair (919) 556-3182
Education - Ann May, Chair (919) 266-9734
Recycling committee - Carolyn Furr, Chair (919) 821-0877/7683
Community projects and public awareness programs.

Knightdale, Town of Knightdale, 207 Main St, PO Box 640, Knightdale, NC 27545
(919) 266-9261 Reed Alexander, Public Works Supervisor.
Curbside recycling program.

Morrisville, Town Hall, (919) 469-1426
Phin Horton, Town Manager.

Raleigh Department of Public Utilities, PO Box 590, Raleigh, NC 27602
(919) 890-3400 Carol Bond, Environmental Coordinator
Solid waste management recycling information and Household Hazardous Waste
Collection Days.

Raleigh Environmental Quality Advisory Board (EQAB), Bee Weddington, Chair;
(919) 890-3400 Cindy Kling, Recording Secretary; (919) 890-3160 Lawrence Wray,
Assistant City Manager, Budget & Administration.
Studies policies and advises the Raleigh City Council.

Raleigh Recycling Program, PO Box 590, Raleigh, NC 27602
Curbside recycling program. Carolyn H. Carter, Assistant City Manager,
Operations, oversees the following programs (919) 890-3070
Larry Mitchell, Raleigh Recycling Coordinator (919) 831-6890
Gerald A. Latta, Sanitation Superintendent (919) 831-6522
Special load pickup - Street Maintenance Division (919) 831-6446
Leaf collection, pickup and delivery - Street Maintenance Division (919) 831-6446
Information on Raleigh's recycling sites, city solid waste and recycling plan
implementation. Information on routes, service areas and logistics.

Rolesville, Town of Rolesville (919) 556-3506.

Sun Shares, 1215 South Briggs Ave, Suite 100, Durham, NC 27703 (919) 596-1870 or (800) 277-1990
Dave Kirkpatrick, Director; Karen Smith, Commercial/Compost Program Manager;
Sara Maulsby, Education and Communications Manager; Peter Somers, Energy
Program Manager; Abrilla Robinson, Curbside Program Manager.
Curbside collection, business pickup, services drop-off sites, information (maps
and guides). Also energy programs, composting, newsletter, research projects
(mixed paper markets, and co-composting), and community programs and
partnerships.

Triangle J Council of Governments, 100 Park Dr, PO Box 12276, Research Triangle Park,
NC 27709 (919) 549-0551 FAX (919) 549-9390. Judy Kincaid, Solid Waste Planner.
Council Hotline (800) 2 HELP 90.

Wake County Cooperative Extension Service, Wake County Office Park,
4001-E Cary Dr, Raleigh, NC 27695 (919) 250-1100
Erv Evans, Cooperative Extension Agent, Home Horticulturalist
Composting, landscaping and lawn management, and pesticide usage.

Wake County Environmental Network, Wake County
Committee members to contact for information: Lois Nixon, Wake County Keep
America Beautiful (919) 856-6778/6779 or Douglas D. Longhini, Administrator,
Wake County Community Development Services (919) 856-6170.
Composed of various member agencies within the county government
administration. Its objective is to compile and provide current environmental
information to public officials and to the general public.

Wake County Recycling Coordinator, PO Box 550, Raleigh, NC 27602
(919) 856-6201 Lowell Shaw
County-wide recycling, manages and supervises new and existing Wake County
recycling projects.

Wake County Solid Waste Manager, Wake County Solid Waste Management Division,
PO Box 550, Raleigh, NC 27602 (919) 856-6149/6186 Phil Carter, Manager
Drop-off site locations, pickup schedules, general information, new school sites
review, and problem areas.

Wake Forest, Town of Wake Forest, 401 Elm St, Wake Forest, NC 27587 (919) 556-1331/2024
John W. Johnson, Public Works Director.
Area drop-off sites and recycling information.

Wendell, Town of Wendell, East 4th St, PO Box 828, Wendell, NC 27591 (919) 365-4444
Steve Biggs, Assistant to the Town Manager.
Area drop-off sites and recycling activities.

Zebulon, Town Hall, Planning Dept, 111 East Vance St, Zebulon, NC 27597
(919) 269-7455 Charlie Horne, Town Manager
Curbside recycling program and community activities.

State

Adopt-A-Highway Program, Highway Beautiful Programs, NC Department of Transportation, PO Box 25201, 1 South Wilmington St, Raleigh, NC 27611 (919) 733-2520, Betsy J. Powell. Reporting: 4009 District Dr, Raleigh, NC 27607. David Allsbrook (919) 733-3213, Wake County Coordinator.

Cooperative Extension Service, Office of the Director, Box 7602, NC State University, Raleigh, NC 27695-7602.

**Keep America Beautiful, NC Department of Transportation, PO Box 25201, 1 South Wilmington St, Raleigh, NC 27611 (919) 733-7621
Public education programs and information on solid waste management.**

Keep North Carolina Clean and Beautiful, Inc, St. Mary's Place, 887-A Washington St, Raleigh, NC 27605 (919) 834-9869.

North Carolina Association of County Commissioners, PO Box 1488, 215 North Dawson St, Raleigh, NC 27602 (919) 832-2893 Ed M. Regan, Assistant Executive Director.

**North Carolina Department of Agriculture, 1 West Edenton St, Raleigh, NC (919) 733-2656
Agronomic Services Division (plant/waste/solution).**

**North Carolina Department of Economic and Community Development, 430 North Salisbury St, PO Box 25249, Raleigh, NC 27611
Energy Division (919) 733-2230 Al Ebron
Market studies on recyclables, workshops. Will be instrumental in the implementation of NC Solid Waste Management Programs.**

**North Carolina Department of Environment, Health and Natural Resources, 3825 Barrett Drive, PO Box 27687, Raleigh, NC 27611-7687
General information (919) 571-4100, FAX (919) 571-4135
Pollution Prevention Pays Program (919) 571-4100 Stephanie Richardson
Technical assistance on industrial waste options.
Solid Waste Management Division (919) 571-4100 Jim Coffey
Workshops and manuals on recycling.
State Recycling Coordinator position no longer exists.
Waste Reduction Program (919) 571-4100 Dexter Matthews
Information on used oil, recycling, hazardous wastes, recyclers, and solid waste.
Department will be instrumental in the implementation of NC Solid Waste Management Programs as required under recent NC legislation.**

North Carolina Economic Development Center, Inc, 201 New Bern Ave, Raleigh, NC 27601 (919) 821-1154.

North Carolina League of Municipalities, PO Box 3069, 215 North Dawson St, Raleigh, NC 27602 (919) 834-1311.

North Carolina Legislature Legislation, Legislative Building, Raleigh, NC
Information on Senate and House Bills
Bill Status Information (919) 733-7779
Printed Bills (919) 733-5648
Legislative Information Office (919) 733-4200.

North Carolina State University Agricultural Publications, PO Box 7603, NCSU, Raleigh, NC 27695.

Pesticide Disposal, North Carolina Department of Agriculture, Raleigh, NC
(919) 733-7366 Bill McClelland
Disposal assistance program for homeowners and farmers. Can arrange pickup of identifiable pesticides; can't accept unknowns at this time.

Federal

Environmental Protection Agency (US) Region 4, 345 Courtland St, NE, Atlanta, GA 30365 (404) 347-3004
General information on recycling, solid waste management, and environmental issues (North Carolina is in this region).

Environmental Protection Agency, Solid Waste/Superfund Hotline (800) 424-9346
Information and publications on recycling and the environment.

Private

Carolinas Glass Recycling Program, 908 South Tryon Street, Suite 2200, Charlotte, NC 28202 (704) 332-2030. Information on how glass is recycled and how to set up a recycling program.

CityLine, sponsored by the News and Observer. Access 24 hrs a day by dialing 549-5100 and entering the 4-digit category code (codes are listed in the N & O newspaper). Code 6955 is How to Use CityLine; Code 2727 is Wake County Recycling Information.

Earth Buddies Recycling Information and Tips. WRDU, 106 FM sponsored 24 hr telephone information service. Access by calling 546-8450, and entering 9738 for the "smart" code. Choose from a menu which includes: Home Recycling; Recycling Aluminum Cans; Recycling glass; Recycling plastic; Recycling newspaper; and Starting a recycling program.

ECOS, Inc, Rt 6, PO Box 261, Chapel Hill 27514 967-3676 Larry Kehrler, Director
Services drop-off sites and business pickup. Service area includes Chatham, Durham, Orange, and Wake Counties for aluminum cans, glass, and newspaper.

Environmental Defense Fund (EDF), 257 Park Ave South, New York, NY 10010
(212) 505-2100. Recycling Hotline (800) 225-5333
Recycling and environmental information and brochures.

Institute for Transportation, Research and Education (ITRE), PO Box 17489,
1100 Navaho Dr, Raleigh, NC 27619 (919) 878-8080 Larry Minor
Recycling directories and information, solid waste studies, and ITRE activities.

Leigh Peek, After Hours Market, 117 Walter Clark Dr, Hillsborough, NC 27278
(919) 732-8911
Educational material, referral service, market development, information on
preycling choices, line of concentrates, paper products, and recycling
accessories (catalog).

MER Recycling, Inc, 813 Ellis Rd, Durham, NC 27703 (919) 598-5795 Jim and Jill Matlack,
General Managers
Recycling information, industry and commercial pickup, buy-back, drop-off site,
and recycling accessories. Currently concentrating on industrial and
commercial accounts.

National Association for Plastic Container Recovery (NAPCOR), 4828 Parkway Plaza
Blvd, Suite 260, Charlotte, NC 28217 (704) 357-3250 Caroline Spielmann
PETE Plastic Container Recycling Hotline (800) 7 NAPCOR
Guide books, brochures, environment-related PETE information, and recycler
listings.

North Carolina Recycling Association, PO Box 25368, Raleigh, NC 27611
(919) 782-8933 FAX (919) 571-7563 Bobbi Tousey, Director; Lynn B. Trachtman,
Projects Manager
Membership organization of individuals, municipal, industrial, institutional,
and business groups involved in recycling.
Provides technical assistance, promotes recycling activities, publishes a quarterly
newsletter, provides referral service and information, and is involved in
legislative issues.

North Carolina Wildlife Federation, 1024 Washington St, PO Box 10626, Raleigh, NC 27605
(919) 833-1923 Charles Hartness, Recycling Coordinator
List of recycling activities by county (including maps), and related Federation
brochures.

Paper Stock Dealers, Inc, 666 Maywood Ave, Raleigh, NC 27603 (919) 833-9783
Sandra Boykin, Office Manager
Information on starting recycling programs at work.
Paper broker, buy-back and pickup.

Real Talk Section of the Southern Bell Telephone Directory. A 24 hour automated service to
local customers by dialing 549-0000 on any touch-tone phone, and using 4 digit
subject entry codes. Headings include: Consumer Hotline and Project
Environment.

Research Triangle Foundation of North Carolina, PO Box 12255, Research Triangle Park, NC 27709 (919) 549-8181 FAX (919) 549-8248 Jeanne Brewer, Director of Communications.

Has formed a Triangle Recycling Association to promote recycling and provide an information network for Park tenants.

Sun Shares, 1215 South Briggs Ave, Suite 100, Durham, NC 27703 (919) 596-1870 or (800) 277-1990
Dave Kirkpatrick, Director; Karen Smith, Commercial/Compost Program Manager; Sara Maulsby, Education and Communications Manager; Peter Somers, Energy Program Manager; Abrilla Robinson, Curbside Program Manager.
Curbside collection, business pickup, services drop-off sites, information (maps and guides). Also energy programs, composting, newsletter, research projects (mixed paper markets, and co-composting), and community programs and partnerships.

Triangle Apartment Association, 3301 Womans Club Dr, Raleigh, NC. Kathy Powell, President (919) 782-1165.
Promoting recycling in apartment complexes.

Wake Community Recycling (WCR), 3948 Browing Place, Suite 206, PO Box 20357, North Hills, Raleigh, NC 27619. Mary Moore, President (919) 571-7884, Kathryn Brubaker, Publicity and Education (919) 848-8694; Barbara Satler, Pilot Recycling Projects (919) 467-6363; Pam Albrecht, volunteers (919) 571-7884.
Demonstration and educational programs about recycling, composting, and waste reduction. Once managed the Raleigh drop-off sites. Conducts pilot recycling drives such as mixed paper collection. Publishes a newsletter.

For additional listings, please refer to other Recycling Contacts sections and to Appendices I & III.

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DROP-OFF SITES

Aluminum Beverage Cans, Glass, and Newspaper (exceptions are noted)

Aluminum beverage cans - should be rinsed and preferably crushed.

Glass - bottles and jars (food and drink containers) - must be rinsed, caps or lids and metal rings removed (labels are OK). Glass must be separated by color (clear, green, and brown). **NOTE:** Blue glass can't be recycled at these sites.

Newspapers - (inserts OK) must be clean, dry, unbagged, untied; do not commingle with other types of paper or dispose of in plastic or paper bags. **NOTE:** At locations where the News & Observer places its bins for newsprint collection (to make mulch and animal bedding), it is necessary to remove all the inserts before recycling the newsprint.

Wake County Container Sites:

Wake County maintained container sites are open daily 7:00-7:00 dawn to dusk (security fence and gate), manned. Call 856-6186.

Container Site #1 - 10505 Old Stage Road [401 South at Old Stage Rd]

Container Site #2 - 6000 Old Smithfield Rd [Feltonville Sanitary Landfill]

Container Site #3 - 266 Aviation Parkway (NC 54 to Morrisville, right on SR 1002, - 1.0 miles on the right]

Container Site #4 - 3600 Yates Mill Pond Road [Lake Wheeler Road to SR 1379, take right fork (SR 1381), site is ~ 3/4 mile on the right]

Container Site #5 - 8401 Battle Bridge Road [US 70 East to Lonnie Poole Store, turn left on SR 2555, cross old US 70, straight through next stop sign to dairy farm on right. Turn right onto unpaved road (SR 2552). Site is ~ 1 mile on the left]

Container Site #6 - 3913 Lillie Liles Road [US 401 North toward Rolesville, left on SR 2050. Site is 2 miles on the right]. Also accepts scrap metal.

Container Site #7 - 9004 Deponie Drive [North Wake Sanitary Landfill]
Also accepts scrap metal

Container Site #8 - 2001 Durham Road [US 1 North from Raleigh, left on NC 98. Site is ~ 2 miles on the left]. Also accepts scrap metal

Container Site #9 - 3401 New Hill-Holleman Road [US 1 South to SR 1127, left on SR 1127.
Site is 1/4 mile on the left]. Also accepts scrap metal

Container Site #10 - 5216 Eagle Rock Knightdale Road [US 64 East, then right on Marks
Creek Rd (SR 2500) to the intersection of Marks Creek Rd and Eagle Rock
Knightdale Rd (SR 2501), turn left. Site is on the right]. Also accepts scrap metal

Community and Business Sites:

Sites for which hours are not noted are unmanned and open
7 days/week, 24 hrs/day.

Hollmet Recycling Corporation - 8828 Hwy 64 East, Knightdale 27545 266-3694 or 231-1300.
Buys aluminum and steel beverage cans (separated).
Open M-F 8:00am-4:00pm; Sat 8:00am-12:00noon.

K and L Scrap Service - PO Box 2067, 2310 Old Garner Rd, Raleigh 27602 828-5426
Buys aluminum and steel/bimetal beverage cans (separated). Accepts glass
but no newspaper. Open M-F 8:00am-4:30pm.

Wake Forest - Wake Forest Plaza Shopping Center, Brook St, Wake Forest
Dropoff for glass, aluminum beverage cans, and newspapers.

Wendell Public Works Facility - 4th St and Hollybrook Drive, Wendell
Dropoff for glass, aluminum beverage cans, and newspapers.
Site may be removed once Wendell has curbside service.

Aluminum Beverage Cans, Glass, Newspaper, Steel Food Cans, and Plastic Soda and Milk Containers (exceptions noted)

Aluminum beverage cans - should be rinsed and preferably crushed.

Glass - bottles and jars (food and drink containers) - must be rinsed, caps or lids and metal rings removed [labels are OK, but must be separated by color (clear, green, and brown)].

Newspapers - (inserts OK) must be clean, dry, unbagged, untied; do not commingle with other types of paper such as waste paper or magazines or dispose of in plastic or paper bags.

Plastic (HDPE #2) **milk and water jugs** - (nonpigmented) should be rinsed, caps removed, and containers crushed.

Plastic (PETE #1) **soda bottles** - (clear and green) should be rinsed, caps removed, and containers crushed.

Steel/tin food cans - should be rinsed and the tops placed inside the cans (labels are OK).

City of Raleigh Drop-off Recycling Program Sites.

Sites are open 7 days/week, 24 hrs/day, unless otherwise noted.

Brennan Station Shopping Center - intersection of Strickland and Creedmoor Rds, Raleigh

Colony Shopping Center - corner of Six Forks and Millbrook, Raleigh

Jaycee Park - 2405 Wade Ave, Raleigh

Longview Gardens Shopping Center - New Bern Ave, Raleigh

Mission Valley Shopping Center - intersection of Western Blvd and Avent Ferry Road, Raleigh

North Boulevard Plaza - Mini City on Capital Boulevard, Raleigh

St. Raphael's Catholic Church - 5801 Falls of the Neuse Rd, Raleigh

Watson's Flea Market - Rock Quarry Rd, Raleigh

Other Community Drop-off Locations

Cary Public Works Recycling Center - 313 North Dixon Ave, Cary

Open M-W 8:00am-5:00pm; Th-F 8:00am-8:00pm;
Sat 8:00am-6:00pm; Sun 1:00am-6:00pm, manned site. **No food cans.** Cary residents only. Also accepts clean, flattened brown cardboard boxes (no food, gray paper or toy boxes) 8:00am-12:00pm on the 2nd and 4th Sat of each month, manned site. Plans are to make cardboard part of every day collection in the near future.

St. Philip Lutheran Church - 7304 Falls of the Neuse Rd, Raleigh 27615 846-2992

Does not accept glass. Also accepts scrap aluminum. Do not mix steel cans or scrap aluminum with the aluminum cans (place these items beside the bins).

Aluminum Beverage Cans, Glass, Plastic Milk and Soda Bottles, White Office, School, and Computer Paper (newspapers where noted)

Wake County School Recycling Program Sites, Lowell Shaw, Wake County Recycling Coordinator 856-6201. Program revenue from the sell of recyclables is returned to the schools.

Aluminum beverage cans - should be rinsed and preferably crushed.

Computer paper (separate from other paper).

Glass bottles and jars (food and drink) - should be rinsed, caps or lids removed (labels OK). Glass must be separated by color (clear, brown, and green). Blue Glass can be placed into the green glass bins.

Office grade paper (white school and office paper only) - includes white copy paper, white legal and notebook paper, white envelopes, impression paper (NCR), computer paper, white tab cards, children's white art and writing paper, white FAX paper and blueprint paper. Not accepted are carbon paper, cardboard, tissue paper, magazines and catalogs, self-sticking envelopes/notes, self-sticking labels, cellophane window envelopes, paper marked with crayons, notepad cardboard backing, brochures (colored paper or high gloss), newspaper, phone books, or colored FAX paper.

Newspaper - NO newspapers collection at sites unless noted (see other drop-off sites accepting newspapers). The News & Observer may provide newspaper collection bins at all the High School Sites as part of its mulch and animal bedding recycling program. All inserts should be removed from the newspapers when participating in this program.

Plastic (HDPE #2) milk and water jugs - (nonpigmented).
Plastic (PETE #1) soda bottles - (clear and green). All plastic
should be rinsed, caps removed, and containers crushed.

The collection bins (igloos) are color coded:
Pale Blue - clear container glass
Tan (divided) - brown and green container glass
Silver - aluminum beverage cans
Pale Yellow - plastic milk and soda bottles (mixed)
White (divided) - computer, and white office paper

All sites are unmanned and open 7 days/week, 24 hrs/day.

Additional Wake County School Recycling Program drop-off sites are under consideration for 1992. A total of 50 sites will be established under this program. Check with Lowell Shaw, Wake County Recycling Coordinator, 856-6201 for further information.

Wake County School Sites:

Adams Elementary School - 805 Western Blvd Ext, Cary
Apex Elementary School - 700 Tingen Rd, Apex
Apex High School - 1501 Laura Duncan Rd, Apex
The N & O has set up bins for newspaper collection.
Apex Middle School - 400 East Moore St, Apex
Athens Drive High School - 1420 Athens Dr, Raleigh
The N & O has set up bins for newspaper collection.
Broughton High School - 723 St. Mary's St, Raleigh
The N & O has set up bins for newspaper collection.
Carnage Middle School - 1425 Carnage Dr, Raleigh
Carroll Middle School - 4520 Six Forks Rd, Raleigh
Cary High School - 638 Walnut St, Cary
The N & O has set up bins for newspaper collection.
Combs Elementary School - 1600 Lorimer Rd, Raleigh
Daniels Middle School - 2816 Oberlin Rd, Raleigh
Douglas Elementary School - 600 Ortega Rd, Raleigh
East Cary Middle School - 1111 SE Maynard Rd, Cary
East Garner Middle School - 900 East Garner Rd, Garner
East Millbrook Middle School - 3801 Spring Forest Rd, Raleigh

- East Millbrook High School - 2201 Spring Forest Rd, Raleigh**
The N & O has set up bins for newspaper collection.
- East Wake High School - 5117 Rolesville Rd, Rolesville**
The N & O has set up bins for newspaper collection.
- East Wake Middle School - 2700 Old Milburnie Rd, Raleigh**
- Enloe High School - 128 Claredon Crescent, Raleigh**
The N & O has set up bins for newspaper collection.
- Farmington Woods Elementary School - 1413 Hampton Valley Rd, Cary**
- Fuquay-Varina High School - 201 Broad St, Fuquay-Varina**
The N & O has set up bins for newspaper collection.
- Garner High School - 2101 Spring Dr, Garner**
The N & O has set up bins for newspaper collection.
- Hunter Elementary School - 1018 East Davie St, Raleigh**
- Joyner Elementary School - 2300 Noble Rd, Raleigh (site opposite school)**
- Kingswood Elementary - 519 Ferrell St, Cary**
- Knightdale Elementary School - 109 Ridge St, Knightdale**
- Lockhart Elementary School - 1320 Smithfield Rd, Raleigh**
- Martin Middle School - 1701 Ridge Rd, Raleigh**
- North Garner Middle School - 720 Powell Dr, Garner**
- Northwoods Elementary School - 500 West Durham Rd, Cary**
- Penny Road Elementary - 10900 Penny Rd, Cary**
- Rolesville Elementary - 307 South Main St, Rolesville**
- Sanderson High School - 5500 Dixon Dr, Raleigh**
The N & O has set up bins for newspaper collection.
- Wake Forest-Rolesville High School - 420 West Stadium Dr, Wake Forest**
The N & O has set up bins for newspaper collection.
- Wake Forest-Rolesville Middle School - 1800 Main St, Wake Forest**
- West Cary Middle School - 1000 Evans Rd, Cary**
- West Millbrook Middle School - 8115 Strickland Rd, Raleigh**
- Zebulon Middle School - 1000 East Old US 64 East, Zebulon**

Community Sites:

Thompson Ball Field - Anderson and Popular St (near Wendell Elementary),
Wendell.

Town of Holly Springs - Town Hall, 121 North Main St, Holly Springs
The N & O has set up bins for newspaper collection.

Cary school children will also be collecting aluminum beverage cans, white paper, and computer printouts as part of a school recycling project (Cheryl Hannah, 469-4387).

Other area schools have recycling projects on-going or planned for student participation.

Automobiles - Scrap/junk

Area salvage and scrap dealers buy back unservicable cars for parts. Check your telephone book for additional listings.

American Metal and Parts Company, Inc - PO Box 17671, Route 2, Raleigh 27619
772-6527 Richard Rogers, President.
Buys automobiles.

Hollmet Recycling Corporation - 8828 Hwy 64 East, PO Box 550, Knightdale 27545 266-3694
or 231-1300. Graham Holland, President; Benny Honeycutt, Manager.
Buys automobiles. Open M-F 8:00am-4:00pm; Sat 8:00am-12:00noon.
Loader service available for large tonnage.

Joher Tiltens Truck and Auto Parts - Poole Rd at the Neuse River 266-2704 or (800) 222-9721
Buys junk cars.

K and L Scrap Service, Inc - PO Box 2067, 2310 Old Garner Rd, Raleigh 27602 828-5426
Buys automobiles. Open M-F 8:00am-4:30pm.
Pickup available for large tonnage items.

Martin's Auto Parts - 5810 Poole Rd, Raleigh 231-6416 or 231-8086
Buys junk automobiles, junk dealer.
M-F 8:00am-5:00pm; Sat 8:00am-12:00noon.

Price's Auto Parts - 1900 Old Crews Rd, Knightdale 266-0171 or (800) 672-9211.
Buys scrap metal, junk and scrap vehicles.
M-F 8:00am-5:30pm.

Rigsbee Auto Parts - Hwy 55, Apex 362-8397
and Hwy 64 East, Raleigh 266-3333 or 266-1172
Buys scrap metal and auto parts.

T T and E Iron and Metal, Inc - 2001 Old Garner Rd, PO Box 554, Garner 27529 772-9190
Alfred Thompson, President 772-8704.
Buys scrap iron and automobile bodies.
Open M-F 8:00am-5:00pm; Sat 8:00am-12:00noon.
Pickup arranged for large tonnage. Serves Wake, Johnson, Orange and Harnett
Counties.

Wagner's Automotive - 4115 South Alston Ave, Durham 27713 544-1729 Pat Wagner,
Secretary. Buys automobile bodies. Serves Chatham, Durham, Orange, and
Wake Counties.

Wake Auto Parts - 3620 Holly Springs Rd, Raleigh 832-0893 or (800) 458-6861
M-F 8:30am-5:00pm; Sat 8:30am-2:00pm.

Bags - Plastic and Paper

Any retail shopping or grocery checkout **bag**. Separate bins are provided for **plastic** (HDPE #2) and **paper** (Kraft) **bags** except where noted. Some stores sell cloth bags. Taking your own reusable bags/totes is an excellent alternative to store bags. Open during store hours unless the bins are located outside the building then, 24 hrs/day.

Food Lion, Harris-Teeter, Kroger, and Winn Dixie Supermarkets. Although Sav-A-Center doesn't provide drop-off bins, they will credit your grocery bill 3 cents for each bag that you provide for packaging your groceries. Check your local telephone directory for stores near you.

Batteries - Household

See Household Hazardous Waste.

Batteries - Lead-acid

Some of these locations will buy back automobile, light truck, or marine lead-acid batteries. Batteries can also be used as trade-in credit toward the purchase of a new battery. Some businesses will charge an exchange fee for not turning in your old battery. These businesses are required to take your old battery in trade when a new battery is purchased. NC Senate Bill 111 also bans placing batteries in landfills. Accepted during business hours.

Advance Auto Parts Stores

3585 Maitland Dr, Raleigh 231-8653
3809 Capital Blvd, Raleigh 872-2981
3950 Western Blvd, Raleigh 828-4208
Tower Shopping Center, Raleigh 721-8653
Tryon Hills Shopping Center, 305 Tryon Rd, Raleigh 779-1222

Hollmet Recycling Corp - 8828 Hwy 64 East, Knightdale 266-3694 or 231-1300

K and L Scrap Service, Inc - PO Box 2067, 2310 Old Garner Rd, Raleigh 828-5426

K Mart Discount Stores, Automotive Service Center

1565 Hwy US 70 West and 401 South, Garner 772-4749
6200 Capital Blvd, Raleigh 876-5646
404 East Six Forks Rd, Raleigh 828-4329
8701 Six Forks Rd, Raleigh 846-6989
4500 Western Blvd, Raleigh 851-4994
960 Kildaire Farm Rd, Cary 467-0321
Limit twelve (12) batteries per visit.

Omni Battery Company of NC - 3216K Wellington Court, Raleigh 876-2230

T T and E Iron and Metal, Inc - 2001 Old Garner Rd, Garner 772-9190

Wake County Convenience Centers operational by late summer 1992

Feltonville Landfill - Hwy NC 55, 5000 Old Smithfield Rd, Apex (between Holly Springs and Apex) 387-2126/0520.

North Wake Landfill (Durant) - off 10208 Durant Rd 847-2035.

Books - Used

Lucy's Book Exchange - 6701-103 Capital Blvd, Raleigh 878-0625

Reader's Corner, Inc - 3201 Hillsborough St, Raleigh 828-7024

See also under **Organization Accepting Usable Items**. Consider donating to area libraries, reading rooms, or selling at books exchanges, flea markets and yard sales.

Cans - Steel/Bimetal Beverage Cans

Most beverage companies are using all aluminum cans, however a few bimetal cans still exist. In small quantities they can be mixed with the aluminum. Do not place steel food cans into the aluminum recycling containers unless instructed to do so.

See under multi-material collection sites collecting aluminum beverage cans, glass, and newspapers.

Cans - Steel/Tin Food

Food cans should be rinsed and the tops placed inside the cans (labels are OK), but no paint or aerosol cans. These are also multi-material drop-off sites. See also Raleigh Curbside.

Brennan Station Shopping Center - intersection of Strickland and Creedmoor Rds,
Raleigh

Colony Shopping Center - corner of Six Forks and Millbrook, Raleigh

Jaycee Park - 2405 Wade Ave, Raleigh

Hollmet Recycling Corporation - 8828 Hwy 64 East, Knightdale 266-3694 or 231-1300
Open M-Th 8:00-5:00; F 8:00-5:30; Sat 8:00-12:00.

Jaycee Park - 2405 Wade Ave, Raleigh

K and L Scrap Service, Inc - PO Box 2067, 2310 Old Garner Rd, Raleigh 828-5426
Open M-F 8:00-4:30.

Longview Gardens Shopping Center - New Bern Ave, Raleigh

Mission Valley Shopping Center - intersection of Western Blvd and Avent Ferry Road,
Raleigh

North Boulevard Plaza - Mini City on Capital Boulevard, Raleigh

St. Raphael's Catholic Church - 5801 Falls of the Neuse Rd, Raleigh

Watson's Flea Market - Rock Quarry Rd, Raleigh

Cardboard - Corrugated

The white slotted cardboard dumpsters located at many malls and strip-businesses are for those businesses only and not for use by the general public. Few public drop-off sites exist in Wake for recycling cardboard. Most sites do not want food or toy boxes (heavily printed or plastic coated).

Cary Public Works Recycling Center - 313 North Dixon Ave, Cary
Accepts clean, flattened brown cardboard boxes (no food, gray paper or toy boxes).
Open 8:00am-12:00noon on the 2nd and 4th Sat of each month, manned site. Plans are to make cardboard part of every day collection in the near future.
This is also a multi-material drop-off location.

Wake County Convenience Centers operational by late summer 1992

Feltonville Landfill - Hwy NC 55, 5000 Old Smithfield Rd, Apex (between Holly Springs and Apex) 387-2126/0520.

North Wake Landfill (Durant) - off 10208 Durant Rd 847-2035.

Cards - Christmas and Greeting

Dorcas Shop - 600 East Chatham St, Cary 467-1351
Will accept these items.

St. Jude's Ranch for Children - PO Box 60100, Boulder City, Nevada 889006-0100
Old holiday and special occasion cards. Recycles the cards by cutting off the front and attaching it to new backing. Sold to support activities and give children responsibilities.

Card collection can be turned into an office or group project.

Cartridge - Laser and Printer

Used laser and printer cartridges are reconditioned, refilled, and then sold at a reduced cost. Your personal cartridge can be reconditioned and returned or traded out for another. Some businesses also re-ink ribbons.

Carolina Laser Cartridge - 1127 Cedarhurst Dr, Raleigh 850-0288
Recycled laser cartridges and ribbon re-inking.

Dura-Line - 975 Walnut St, Suite 262, Cary 27511 460-9370
Manufactures and distributes new and recycled printer supplies.

Just Laser - PO Box 13545, Research Triangle Park 27709 787-3245. Laser cartridge recharging specialists.

Laser Recharge of Carolina - 108-C Woodwinds Industrial Ct, Cary 467-5902 or (800) 825-0664. Toner cartridge specialists (new and recharge for laser printers and Canon PC).

Laser Renew - 1702 Laughridge Dr, Cary 380-1613
Recharges laser and printer cartridges.

Toner Solutions - 600 East Chatham St, Cary 467-3470
Recharges toner cartridges.

Triangle Charge - PO Box 31126, Raleigh 27622 782-0229 Bill Fraser
Pick up service, no walk in.

Christmas Trees - Chipping

Trees are chipped, and the resulting mulch is used in city parks or made available to the public. Trees should be stripped of all decorations, metal, wire, and have the tree stands removed. Drop-off sites may change or be eliminated or perhaps be replaced by curbside collection. Call your Public Works Department for scheduling and locations. Many citizens are choosing to use live trees (root balled) and plant them after the holidays.

Cary - 469-4396 City lot across from Triangle Swim Club on Old Apex Rd between West Chatham and Northwest Maynard Rd. Open 24 hrs/day, unmanned, from late Dec through mid-Jan.

Garner - 772-7600 Public Works Complex, 610 Rand Mill Road.

Raleigh - 831-6446 City salt storage shed, Dortch St near Wade Ave and Capital Blvd. Open 7:30am-4:00pm, manned, from Jan 2 through mid-Jan. The chipped mulch is taken to the State Fairground off Trinity Road.

Wake Forest - Tyler Run Park on Pineview Dr, Tyler Run Subdivision.

Christmas Trees: Artificial Reefs

R.C. Duckson, US Army Corps of Engineer's Office at Jordan Lake 542-4501/2227 can coordinate group efforts. Call before taking trees to drop-off sites. Trees should be stripped of all decorations, metal, wires, and have the tree stands removed. Drop off beginning 12/25.

Jordan Lake, Crosswinds Marina - on SR 1008, 1/2 mile north of US 64
Albert Urquhart or Charles Stephens 362-5391

Jordan Lake, G.R. Farrell and Sons Grocery Store - on SR 1008, 1 mile north of Farrington Point boat access ramp
G.R. Farrell 933-8569

Jordan Lake, Moncure Plywood Outlet - on Old US 1 542-4721

Jordan Lake, Wilsonville General Store - on US 64 near the east shore of the lake
Vossie Holton or John Arthur 362-7101

Coat Hangers - Metal/Wire

Coat/clothes hangers in good condition, not deformed, and free of any rust, can often be returned to dry-cleaners for reuse. If your cleaner is not listed, give them a call because they may be willing to accept hangers from their customers.

Cascade Cleaners

5800 Duraleigh Rd, Raleigh 783-0808
101-B New Waverly Place, Cary 859-2787
Steeple Square Shopping Center, Raleigh 266-7878
Accepts good condition wire coat/clothes hangers.

Glam-O-Rama Cleaners and Coin Laundry

1601-62 Cross Link Rd, Raleigh 821-4466
Forest Hills Shopping Center, Raleigh 772-3171
Hechinger Plaza, Raleigh 876-6606
Hwy 401 South, Raleigh 772-6411
121 West Durham Rd, Cary 460-7565
3801 Western Blvd, Raleigh 834-2067
Accepts good condition coat/clothes wire hangers.

Karr Cleaners

113 SW Maynard Rd, Cary 467-9495
101 Ward St, Cary 467-9495
Accepts good condition coat/clothes wire hangers.

Lake Boone Cleaners, Lake Boone Shopping Center, Raleigh 781-9397

Accepts only good condition wire pants hangers with cardboard sleeve.

Martin Cleaners, 540 East Williams St, Apex 362-9414

Accepts good condition wire coat/clothes hangers.

Medlin Davis

Cameron Village Shopping Center, Raleigh 828-7254
2016 Cameron St, Raleigh 380-1080
Gateway Plaza Shopping Center, Raleigh 834-7570
Hemlock Plaza Shopping Center, Raleigh 387-9191
KidJshill Plaza, Raleigh 781-5111
Kildaire Plaza, Cary 467-2020
MacGregor Village, Cary 469-5757
Shoppes of Kildaire, Cary 467-2335
Accepts good condition coat/clothes wire hangers.

Composting

NC Senate Bill 111 states that after 1 January 1993 yard trash (limbs, brush, leaves, etc.) will only be accepted at landfills classified for such material. Municipal or private composting programs are being considered in many municipalities to divert this resource from the landfill. To comply with mandated reduction goals, some municipalities may need to change the way residential waste is currently being collected. Call your Public Works Department for details and scheduling in your area. Contact your Cooperative Extension Agent for guidelines on backyard composting.

Wake County will be managing at least five yard waste landfills throughout the county. See **Yard Waste**.

BFI Yard Waste Facility, Old Holly Springs Apex Rd in Holly Springs 557-0519 will accept grass, brush, leaves, limbs, and trees for a fee.

See also Leaves, Limb and Brush, and Christmas Trees in this section and Curbside Programs.

Glass

Most collection sites collect food and beverage glass. Glass must be separated by color into clear, brown, or green. Before placing blue glass into a bin, **check** the signs to see if it can be recycled (blue, if accepted, usually will go into the green container). The following should not be placed into the glass bins: drinking glasses, window glass, safety glass, ceramics, dishware, Pyrex/Kimax/Corning glass, light bulbs, fluorescent tubes, headlights, leaded glass, borosilicate (laboratory) glass, and mirrors.

See under multi-material collection sites collecting aluminum beverage cans, glass, and newspapers at the beginning of this section.

Household Hazardous Waste

Household Hazardous Waste Collection Day for Raleigh and Wake County residents. Usually held once in the spring (April) and in the fall (November), Sat 8:00-4:00. Watch the newspaper for ads or call 890-3605 (message) or 890-3400 for dates and information. Past collection sites have included the **Public Utilities Operations Center Terminal Drive**, at 3304 Lake Woodard Dr behind Tower Shopping Center, Raleigh and one other site listed below.

NC State Fairground - Youth Center Rd Gate #5, off Hillsborough St, Raleigh

North Carolina State University, McKimmon Center - corner of Western Blvd and Gorman St, Raleigh

Leaves

Generally no public drop-off sites are provided. Leaves collected curbside are taken to municipal leaf piles (see curbside programs). In some municipalities leaf mulch is made available free to citizens.

Wendell residents can take their leaves (free of other debris) to Wendell's mulch pile located at the south end of Wendell's waste treatment plant.

BFI Yard Waste Facility, Old Holly Springs Apex Rd in Holly Springs 557-0519 will accept grass, brush, leaves, limbs, and trees for a fee.

Limbs and Brush

Raleigh - Wood chip mulch (chipped from yard debris) is available from the mulch pile at the intersection of Trawick and New Hope Rd.

Cary has a two-man chipper crew who will chip limbs at your site for \$15/hr. Call 469-4090.

BFI Yard Waste Facility, Old Holly Springs Apex Rd in Holly Springs 557-0519 will accept grass, brush, leaves, limbs, and trees for a fee.

See **Curbside Collection Programs**.

Magazines

Magazines are one of the more difficult materials to recycle locally. They can be included in mixed paper collections such as those conducted by Wake Community Recycling. Magazines will be accepted at the North Carolina Department of Corrections locations. Call. Box or bag and take to the front gates of the prison.

Women's Prison - women's or all-news magazines
Polk Youth Center - teen magazines
Central Prison - men's or all-news magazines

Raleigh Rescue Mission Recycling Center - 512 East Davie St, Raleigh 834-0197
William Brown, 828-9014 Newspapers and magazines.

Dorothea Dix Volunteer Services, Raleigh 733-5454.

See also **Organizations accepting usable items** and watch your newspaper for special collection drives.

Consider sharing with friends and relatives, retirement homes, and institution or business waiting rooms. Some church and school classes may be able to use in classroom assignments or special projects.

Metals - Scrap (Ferrous and Nonferrous)

Sites buy back (where noted) materials such as aluminum, brass, copper, steel, and stainless steel in a variety of forms. Call first. For information on the container sites call 856-6201. Container sites are open 7:00am-7:00pm, 7 days a week (security fence and gate), others as noted.

Container Site #6 - 3913 Lillie Liles Road [US 401 North toward Rolesville, left on SR 2050. Site is 2 miles on the right]. Accepts any scrap metal.

Container Site #7 - 9004 Deponie Drive [North Wake Sanitary Landfill]
Accepts any scrap metal.

Container Site #8 - 2001 Durham Road [US 1 North from Raleigh, left on NC 98. Site is - 2 miles on the left]. Accepts any scrap metal.

Container Site #9 - 3401 New Hill-Holleman Road [US 1 South to SR 1127, left on SR 1127. Site is 1/4 mile on the left]. Accepts any scrap metal.

Container Site #10 - 5216 Eagle Rock Knightdale Road [US 64 East, then right on Marks Creek Rd (SR 2500) to the intersection of Marks Creek Rd and Eagle Rock Knightdale Rd (SR 2501), turn left. Site is on the right]. Accepts any scrap metal.

Hollmet Recycling Corporation - 8828 Hwy 64 East, Knightdale 266-3694 or 231-1300
Buys aluminum beverage cans, aluminum scrap, scrap iron, copper, brass, steel beverage cans, tin cans, and automobiles (no appliances).
Open M-Th 8:00am-5:00pm; F 8:00am-5:30pm; Sat 8:00am-12:00noon.

K and L Scrap Service, Inc - PO Box 2067, 2310 Old Garner Rd, Raleigh 828-5426
Buys aluminum and steel beverage cans, scrap ferrous and nonferrous metal, cast iron, copper, brass, steel, and automobiles. Open M-F 8:00am-4:30pm.

Reynolds Aluminum Recycling Center off-street customer center - 1617 Capital Blvd, Raleigh 27604 834-5479 or 832-8178 (taped message), 833-3055 (questions), or (800) 228-2525 (prices). No Trailer sites are operating in Wake County.
Buys aluminum beverage cans, aluminum scrap, copper, brass, and radiators.
Open T-F 8:30am-5:00pm; Sat 8:30am-4:30pm.

T T and E Iron and Metal, Inc - 2001 Old Garner Rd, Garner, NC 27529 772-9190
Buys scrap iron and nonferrous metals, appliances (motor removed), tin (no cans), and automobiles bodies.
Open M-F 8:00am-5:00pm; Sat 8:00am-12:00noon.

Newspaper

The Raleigh News and Observer has placed mobile bins in various locations around the county to collect old newsprint for use in making animal bedding and mulch. Newspapers placed into these bins must be clean, dry, unbagged, and untied; not commingled/mixed with other types of paper or disposed of in plastic or paper bags. **NOTE:** These sites are for newsprint only. It is necessary to remove all the inserts especially the glossy, and any stapled sections. Inserts can be included at all other sites.

All high schools participating in the Wake County School Recycling Program are scheduled to have N & O bins before the year's end.

Sites are open 7 days/week, 24 hrs/day, unless otherwise noted.

Broughton High School - 723 St. Mary's St, Raleigh, (N & O location). Site is also a Wake County School Recycling Program site.

Cary High School - 638 Walnut St, Cary, (N & O location). Site is also a Wake County School Recycling Program site.

The Cary News Office - 212 East Chatham St, Cary (N & O location).

East Millbrook High School - 2201 Spring Forest Rd, Raleigh (N & O location).

Fuquay-Varina High School - 201 Broad St, Fuquay-Varina, (N & O location).
Site is also a Wake County School Recycling Program site.

Garner High School - 2101 Spring Dr, Garner, (N & O location). Site is also a Wake County School Recycling Program site.

NCSU Campus - Hillsborough St, Raleigh (N & O location).

The News and Observer Newspaper Recycling Center - Martin St (between McDowell St and Salisbury St), 215 South McDowell St, Raleigh 27602 (919) 829-8903, Danny Collins. M-F 6:00am-3:00pm; Sat 8:00am-3:00pm (N & O location).

Rolesville Elementary School - 307 South Main St, Box 40, Rolesville, 1st Saturday of each month, all day. Newspaper.

Sanderson High School - 5500 Dixon Dr, Raleigh, (N & O location). Site is also a Wake County School Recycling Program site.

Town of Holly Springs - Town Hall, 121 North Main St, Holly Springs (N & O location).

United Federal Savings Bank - 831 Kildaire Farm Rd, Cary 467-8156
(N & O location) for Newspaper. Site also collects milk jugs, and soda bottles, and HDPE (pigmented and nonpigmented #2) containers other than milk jugs.

See also under multi-material sites collecting **aluminum beverage cans, glass, and newspaper** as well as area curbside programs.

Oil - Motor

Drop-off/no pay up to 5 gals/trip, no commercial users. Oil must be capped and labeled in a plastic container. It must be free of any contamination (water or other liquids). Landfills open M-Sat 7:00am-4:00pm (unless otherwise noted). Please check in at landfills.

Advance Auto Parts Stores

3585 Maitland Dr, Raleigh 231-8653
3809 Capital Blvd, Raleigh 872-2981
3950 Western Blvd, Raleigh 828-4208
Tower Shopping Center, Raleigh 721-8653
Tryon Hills Shopping Center, 305 Tryon Rd, Raleigh 779-1222

Apex Public Works Department Compound - 105 Upchurch St, Apex 362-8166.
Open M 9:00am-11:00pm. Limit 2 gals/trip.

Cary Public Works Recycling Center - 313 North Dixon Ave, Cary
469-4090 Open M-F 7:30am-4:30pm. Leave in a capped container on the cement slab near the gate. Cary residents only. Cary also picks up motor oil weekly at curbside, see Curbside Recycling Programs.

Feltonville Landfill - Hwy NC 55, 5000 Old Smithfield Rd, Apex (between Holly Springs and Apex) 387-2126/0520

Noble Oil Company - Sanford, NC (800) 544-0184
Home or motor oil exceeding 55 gallons.

North Wake Landfill - 10208 Durant Rd 847-2035

PEP Boys

1490 US 70 West, Garner 662-7455
6806 Davis Circle, Raleigh 781-9317
Open M-F 8:00am-9:00pm; Sat 8:00am-8:00pm; Sun 9:00am-6:00pm.

Public Utilities Operations Center - Terminal Drive, at 3304 Lake Woodard Dr behind Tower Shopping Center, Raleigh on specified dates as part of the City of Raleigh/Noble Oil's Used Oil Collection Day 890-3605 (message) or 890-3400. Usually open Sat 9:00am-3:00pm.

Quick 10 Oil Change

8207 Creedmoor Rd, Raleigh 846-9316
5929 Glenwood Ave, Raleigh 781-1116
3817 North Blvd, Raleigh 872-4488
1401 Kildaire Farm Rd, Cary 467-0330
1537 West Hwy US 70, Garner 779-6080
Open M-F 8:00am-8:00pm; Sat 8:00am-6:00pm; Sun 1:00am-5:00pm.

Wilders Grove Sanitary Landfill - 4120 New Bern Ave, US 64 East, Raleigh 231-6381

Paint - Waste

Includes all types of paints regardless of condition or quantity.

See Household Hazardous Waste.

Paper (Various types)

The recyclers indicated below accept various types of paper as noted. Some buy back certain grades of paper. Because of price fluctuations in the market place, at times there may be a charge for leaving lower grades of paper, if the company will accept them at all. Please call the recycler before dropping off paper.

Eastern Waste Paper Co - S.R. 1701, Rt 1, Box 260, Wendell 27591 365-9380
Buys computer print-outs, office waste paper (all types), corrugated cardboard, and IBM cards. No carbon Open M-F 8:00am-5:00pm.

Paper Stock Dealers, Inc - 666 Maywood Ave, Raleigh 833-9783
Buys office grades of paper, computer, ledger, newspaper, corrugated cardboard (prefer 300 lb min on paper).
Will pickup/no charge/no pay corrugated cardboard and office paper
Drop-off/no pay: magazines and junk mail (no food boxes, catalogs or waxed paper). Market is subject to change - Call to confirm that they are accepting.
Open M-Th 7:30am-12:00noon and 1:00pm-4:00pm; F 7:30am-12:00noon and 1:00pm-3:30pm.

Raleigh Rescue Mission Recycling Center - 512 East Davie St, Raleigh 834-0197
Accepts newspaper and magazines.

**Thompson Ball Field - Anderson and Popular St (near Wendell Elementary),
Wendell. Accepts white office, school, and computer paper.**
Drop-off site open 24 hrs/day.

Town of Holly Springs - Town Hall, 121 North Main St, Holly Springs
Accepts white office, school, and computer paper.
Drop-off site open 24 hrs/day.

See also **Organizations Accepting Usable Items** (books and magazines).

See also sites accepting **aluminum beverage cans, glass, plastic milk and soda bottles, white office, school, and computer paper** (Wake County School Recycling Program Drop-off Sites).

See also **Cardboard, Cards, and Telephone Books**.

Watch your local newspaper for announcements of special paper collections.

Pesticides

This group includes any poison, insecticide, herbicide, or germicide. Good housekeeping and/or cultural practices can often eliminate or greatly reduce the need for pesticides. Call your Cooperative Extension Service for recommendations on reducing chemical usage in the landscape. Consult guides which give alternatives to some of the harsher commercial disinfectants. If chemicals are needed, buy only what is necessary, use according to directions, and dispose of properly.

Pesticide Disposal, North Carolina Department of Agriculture - Raleigh
(919) 733-7366 Bill McClelland
Disposal assistance program for homeowners and farmers. Can arrange pickup of identifiable pesticides; can't accept unknowns at this time.

See **Household Hazardous Waste**.

Plastic - (HDPE #2) Milk and (PETE #1) Soda

Sites accept HDPE (#2) - nonpigmented milk and water jugs; PETE (#1) - soda bottles (clear and green). Open 24 hrs/day, unless noted otherwise.

Cary Public Works Recycling Center - 313 North Dixon Ave, Cary
Separate containers for green and clear PETE soda bottles.
Open M-W 8:00am-5:00pm; Th-F 8:00am-8:00pm; Sat 8:00am-6:00pm;
Sun 1:00pm-6:00pm, manned site.

St. Philip Lutheran Church - 7304 Falls of the Neuse Rd, Raleigh 27615 846-2992

Thompson Ball Field - Anderson and Popular St (near Wendell Elementary),
Wendell.

Town of Holly Springs - Town Hall, 121 North Main St, Holly Springs

United Federal Savings Bank - 831 Kildaire Farm Rd, Cary 467-8156
Collection bin for milk jugs, soda bottles and newspaper. Site also collects HDPE (pigmented and nonpigmented #2) containers other than milk jugs.

See also **Wake County School Recycling Program Drop-off Sites** under sites accepting aluminum beverage cans, glass, plastic milk and soda bottles, white office, school, and computer paper and Curbside Programs.

Plastic - HDPE (other than Milk jugs)

Southern Case - 2315 Laurelbrook St, Raleigh 821-7683
Accepts plastic HDPE containers (pigmented and nonpigmented #2) only.
Included are milk, water, shampoo, detergent bottles, and nontoxic household product containers. Excluded are antifreeze and oil containers.

United Federal Savings Bank - 831 Kildaire Farm Rd, Cary 467-8156
Collection bin for milk jugs, soda bottles and newspaper. Site also collects HDPE (pigmented and nonpigmented #2) containers other than milk jugs.

See also **Curbside Programs**.

Plastic - LDPE (six pack rings)

Wake County Elementary Schools in partnership with Hi-Cone and Wake County Keep America Beautiful are collecting and recycling these rings. The schools are provided with a special wooden peg-tree. A student gets an environmental sticker for every 5 rings brought in to hang on the tree. This is an ongoing project.

Adams Elementary School - 805 Western Blvd Ext, Cary

Apex Elementary School - 700 Tingen Rd, Apex

Combs Elementary School - 1600 Lorimer Rd, Raleigh

Douglas Elementary School - 600 Ortega Rd, Raleigh

Farmington Woods Elementary School - 1413 Hampton Valley Rd, Cary

Hunter Elementary School - 1018 East Davie St, Raleigh

Joyner Elementary School - 2300 Noble Rd, Raleigh (site opposite school)

Kingswood Elementary - 519 Ferrell St, Cary

Knightdale Elementary School - 109 Ridge St, Knightdale

Lockhart Elementary School - 1320 Smithfield Rd, Raleigh

Northwoods Elementary School - 500 West Durham Rd, Cary

Penny Road Elementary - 10900 Penny Rd, Cary

Rolesville Elementary - 307 South Main St, Rolesville

Plastic - PS (packing peanuts #6)

Plastic polystyrene peanuts, any color or shape. Must be clean and uncontaminated. If you ship your own packages, included a note asking the recipient to reuse or recycle. NOTE: There are several types of peanuts being used today besides polystyrene. These include: paper, popcorn, polyethylene, cellulose, and starch. Before mixing different types, check with the business to insure a blend is OK.

Mail Box Plus - 6040-A Six Forks Rd, Raleigh 848-7844
Accepts peanuts and blocks (1 1/2" thickness preferred).

MBE Mail Boxes, Etc
5611 Creedmoor Rd, Raleigh 881-0352
North Stations Shopping Center, Hwys 401 and 70, Garner 662-8800
Shoppes of Kildaire, Kildaire Rd, Cary 460-5880
7413 Six Fork Rd, Raleigh 676-1280

Packaging Store - 963 North Harrison Ave, Cary 467-2711
311-D Asheville Ave, Cary 851-3711
Accepts peanuts and blocks (1 1/2" thickness preferred).

The Packaging Store - 5210 Hollyridge Dr, Raleigh 781-1020
Accepts peanuts and blocks (1 1/2" thickness preferred).

Pak Mail Center of America - 3201 Edwards Mill Rd, Raleigh 783-8939
8711 Six Forks Rd, Raleigh 870-0595

Telephone Books/Directories

Sites accept old telephone books usually during February ONLY.
Unmanned sites, open 24 hrs/day. Some sites are set up to take large volumes with dump-off capacity, as noted.

This program is operated by the Wake Solid Waste Management Division 856-5277.

Locations should be listed on an insert in the Raleigh telephone books and in news releases. The future of this program will greatly depend on a stable market for lower grade paper. The 1992 collection includes any area directory.

Bell South changed to a water-based glue in their directory bindings (1992-1993 edition). Future collections in Wake County (starting with 1993) may be limited to just Bell South books having the water-soluble glue. Hot-melt glue used in other area directories will contaminate this collection. Please check carefully the instructions for the telephone book collection in your area.

Other private sites will be provided by businesses and organizations for their employees.

- Athens Drive High School - 1420 Athens Dr, Raleigh**
- Cary High School - 638 Walnut St, Cary**
- Facility Management - 413 North Salisbury St, Raleigh**
- Fuquay-Varina High School - 201 Broad St, Fuquay-Varina**
- Garner High School - 2101 Spring Dr, Garner**
- Highway Building - 1 South Wilmington St, Raleigh**
- Jaycee Park - 2405 Wade Ave, Raleigh**
- Lake Crabtree County Park - 1400 Aviation Parkway, off I 40 toward Morrisville**
- NC Department of Administration - 116 West Jones St/McDowell St entrance, Raleigh**
- NC State Fairgrounds - Hillsborough St across from Dorton Arena, Raleigh**
- NC State University Campus - Physical Plant Complex off Sullivan Dr, Raleigh**
- Reynolds Aluminum Recycling Company - 1617 Capital Blvd, Raleigh**
- Sanderson High School - 5500 Dixon Dr, Raleigh**
- Scott's Food Pride - 301 East Williams St and NC 55 Hwy, Apex**
- Sommerset Center/South Trust Bank - 4505 Falls of Neuse Rd, Raleigh**

Vacant Lot - Wilson Ave and Pine St, Wendell

Wake County Container Site # 6 - 3913 Lillie Liles Rd, Wake Forest/Rolesville.
Dump-off site.

Wake County Container Site # 10 - (SR 2500/2501), 5216 Eagle Rock Knightdale Rd,
Knightdale. Dump-off site.

Wake County Office Park - Poole Rd/Beltline, Raleigh

Wake Forest Recycling Site - Brooks St, Wake Forest

Zebulon Public Works Building - East Horton St, Zebulon

Tires

Fee for tires \$1/auto or \$50/ton, unless otherwise noted.

A \$1.00/tire charge is added to new tire purchase prices for disposal.

Open M-Sat 7:00am-4:00pm, check in.

Feltonville Landfill - Hwy NC 55, 5000 Old Smithfield Rd, Apex (between Holly Springs and Apex) 387-2126/0520

Wilders Grove Sanitary Landfill (City of Raleigh Landfill) - 4120 New Bern Ave,
US 64 East 231-6381

Fee \$50/ton, no charge for individual citizens with 5 or less regular tires per visit
(maximum of 20 per year).

Wake County Convenience Centers operational by late summer 1992 will include:

Feltonville Landfill - Hwy NC 55, 5000 Old Smithfield Rd, Apex 387-2126/0520

North Wake Landfill (Durant) - off 10208 Durant Rd 847-2035.

White Goods/Appliances - Scrap

Landfills will accept appliances (freezers, refrigerators, washers/dryers, water heaters) with motors intact. Scrap-metal dealers may require that motors be removed. The County landfills now charge \$7 for each appliance delivered to their site. A larger fee is assessed if it is picked up from your location (see Curbside Programs).

Cary Public Works Recycling Center - 313 North Dixon Ave, Cary 469-4090/4092
Fee for drop-off at this site is \$11. Open M-W 8:00am-5:00pm; Th-F 8:00am-8:00pm; Sat 8:00am-6:00pm; Sun 1:00pm-6:00pm, manned site.

Feltonville Landfill - Hwy NC 55, 5000 Old Smithfield Rd, Apex (between Holly Springs and Apex) 387-2126/0520. Open M-Sat 7:00am-4:00pm, check in.

North Wake Landfill - 10208 Durant Rd 847-2035.
Open M-Sat 7:00am-4:00pm, check in.

T T and E Iron and Metal, Inc - 2001 Old Garner Rd, Garner 772-9190
Motors should be removed. Open M-F 8:00am-5:00pm; Sat 8:00am-12:00noon.

Wilders Grove Landfill (City of Raleigh Landfill) - 4120 New Bern Ave, Raleigh 231-6381.
Open M-Sat 8:00am-4:00pm.

NOTE: Both the Feltonville and North Wake Landfills will become Convenience Centers by late summer.

White Goods/Appliances - Usable

In good working condition or servicable.

See Organizations Accepting Usable Items.

Other Materials - miscellaneous

Bricks, lumber, building material, furnaces, rolls of carpet, rocks, dirt or storage buildings. If these items are not salvagable or reusable, then they can be disposed of at the City and County Landfills. Demolition Landfills have been designated. Call the Sanitation Division (919) 831-6890.

BFI Yard Waste Facility, Old Holly Springs Apex Rd in Holly Springs 557-0519 will also accept bricks, concrete, rocks, untreated/unpainted lumber for a fee.

NONPROFIT RECYCLERS

Raleigh Rescue Mission Recycling Center - 512 East Davie St, Raleigh 834-0197
William Brown, 828-9014 Newspapers, magazines, furniture, appliances, clothing, and misc.

ECOS, Inc, Rt 6, PO Box 261, Chapel Hill 27514 967-3676 Larry Kehrer, Director
Services drop-off sites and business pickup. Service area includes Chatham, Durham, Orange, and Wake Counties for aluminum cans, glass, and newspaper.

Sun Shares, 1215 South Briggs Ave, Suite 100, Durham 27703 596-1870 or (800) 277-1990
Dave Kirkpatrick, Director; Karen Smith, Commercial/Compost Program Manager; Sara Maultsby, Education and Communications Manager; Abrilla Robinson, Curbside Program Manager; Peter Somers, Energy Program Manager.
Curbside collection, business pickup, drop-off sites, information (maps and guides)
Drop-off/no pay (1215 South Briggs Ave) for newspaper, glass, aluminum, beverage cans, plastic (PETE) soda, (HDPE) milk and water jugs, and flattened corrugated cardboard. Open 24 hours.
Office and computer paper accepted M-F 7:00am-4:00pm only.
NOTE: NOT accepted are gift boxes, wrapping, paper and ribbons.
Backyard Composting Demonstration Sites: NC Museum of Life and Science, West Point on the Eno Park, and Sun Shares Warehouse.

Wake Community Recycling - 2421 Timber Dr, PO Box 1812, Raleigh 27602 856-0724
(taped message). Lib Willard, President. Involved in education and environmental awareness. Periodically will have seminars and pilot recycling programs.

ORGANIZATIONS Accepting usable items

General Items

The organizations listed below accept most any household item or ware, books, magazines, clothing (adults' and children's), furniture, toys, food, small and large appliances (in working condition). NOTE: Some organizations may have a select list of needs or items they'll accept. A few maintain a client needs list for matching with donors. Many will not accept mattresses and box springs. All items should be in good repair. Other items with any exceptions are noted under the individual entry. Call because needs change. Pickup is usually available for large items or quantities (call to arrange). Organizations open during normal store hours.

Advances, 781-2093 or 772-4925.

Needs household items and furniture.

Agape Place, 409 East Jones St, Raleigh 27601 833-3545 Barbara Levy

Accepts good mattresses and box springs. Limited storage facilities.
Needs food processor, small kitchen appliances, and food.
Maintains a client needs list. Call about pickup.

AME Raleigh Day Shelter Supporters, 520 West Harrington St, PO Box 1606,
Raleigh 27602 832-7372

No mattresses and box springs. Needs good typewriter for office, food,
winter clothing (call). Call about pickup.

Catholic Parish Outreach, 408 North Capital Blvd, Raleigh 27603
834-9680 Bob McBride

No furniture. Needs clothing, all sizes (especially larger women's sizes,
maternity, and baby); men's work clothes and boots; linens; small usable
kitchen appliances; food. Pickup is not available.

Christian Community in Action, Social Concerns Office, 600 East Chatham St,
Cary 27511 469-9861

Needs bed linens, food. Works with the Dorcas Shop in Cary.

Community Mission, 2044 New Bern Ave, Raleigh, NC 27610 836-1656

Can't repair appliances. Needs kitchen items (especially dishes, silverware),
household wares and non-perishable foods. Can arrange pickup.

Disabled American Veterans Thrift Store, Dept of NC, 201 East Hargett St, Raleigh
833-7939

No overstuffed furniture (unless in excellent condition - call)
Accepts good mattresses and box springs, cars, boats. Can repair appliances.
Pickup arranged for large items.

Dorcas Shop, 600 East Chatham St, Cary 27511 469-1351

No school or text books. Accepts good mattresses and box springs, toys.
Needs children/baby clothes. Can't repair appliances. Can't provide pickup.

Garner Area Ministry, 401 Aversboro Rd, PO Box 797, Garner 27529 772-9100

Needs food (staples), clothing (especially baby). Pickup not available.

Girls Club of Wake County, 833-9633. Accepts craft supplies, furniture, and cooking utensils. Call to check exact needs.

God's Helpers, Inc, 500 East Cabarrus St, Raleigh, NC, 27601 828-3541

Accepts mattresses and box springs. Needs small appliances (can do some repair).
Also provides assistance/services to the elderly. Pickup can be arranged.

Goodwill Industries, 321 West Hargett St, Raleigh 27601 834-0504

No food, kerosene heaters, mattresses and box springs, or magazines.
Accepts repairable appliances. Pickup for large items.

Goodwill Industries, 1677 North Market Dr, Raleigh, NC 878-3933

No mattresses and box springs. Can't repair appliances.
Pickup for large items.

Helping Hand Mission of Cary, 136 West Chatham St, Cary 27511 481-1411

Accepts good mattresses and box springs. Can't repair appliances. Needs winter clothing. Pickup arranged in local area.

Helping Hand Mission, 623 Rock Quarry Rd, Raleigh 829-8048

Needs winter clothing, large appliances but can't repair them, and often toys.
Pickup for large items.

Helping Hand Mission Resource Center, 600 West South St, Raleigh 828-4849

Needs non-perishable food, household and kitchen items.

Helping Hands for the Handicapped 782-1942

Annual toy drive. Toys, stuffed animals, childrens books, etc.

Junior League Bargain Box, 2104 Smallwood Dr, Raleigh 27607 833-7587 Audrey Smith

Fundraiser for league's projects. Accepts good mattresses and box springs.
No pickup available.

Life Experiences Thrift Shop, Inc, 1335 Buck Jones Rd, Raleigh 27606 467-1973

Accepts good mattresses and box springs. Can do minor appliance repair.
Needs baby clothes and toys. Pickup not available.

Making Ends Meet Thrift Store, 418 South McDowell St, Raleigh, operated by the Wake County Mental Health Service, Emily Hodgkin, Manager 856-5250.
Needs furniture and large size clothing. Can't accept large appliances.
Pickup available for larger items on Thursdays.

Raleigh Rescue Mission Recycling Center, 512 East Davie St, Raleigh 834-0197
Can do minor repair. Pickup arranged for large items.

Salvation Army, 1209 US Hwy 70 West, Garner 779-8867

Salvation Army, Administration and Welfare Office, 215 South Person St, Raleigh
834-6733
Pickup arranged for large items.

Salvation Army Family Thrift Store, 2223 New Hope Church Rd, Raleigh 876-5419
Sales store for Salvation Army Office above.

Social Services Department, Community Resources, Wake County, County Office Bldg,
Raleigh 856-7083 J.S. Grimes, Gene English
No mattresses and box springs. Can't repair appliances.
Needs stoves, convalescent items (walkers, wheel chairs, crutches, etc.), fans.
Maintains a client needs list. No pickup readily available.

Spectrum House, 401 East Whitaker Mill Rd, Raleigh 27608 (main office) 856-6420
Mike Mescall, Director
Can't repair appliances, limited storage space. Needs household items.
Maintains a client needs list. Pickup available.

Telamon, 3937 Western Blvd, Raleigh 27636 851-7611
Assists migrant workers (transient population). Needs clothing.

Urban Ministry Center of Raleigh, Administrative Offices, PO Box 27476,
Raleigh 27611 836-1642 Nancy Evans
The Ark Shelter, 401 West Cabarrus St, Raleigh 27601
834-4707 Dorothy L. Ellis, Director
No clothes except underwear, socks, gloves, scarves.
Needs food (nonperishable), over-the-counter medications, doctor's samples,
magazines, wash cloths, blankets, linens.
Crisis Intervention Center, 310 West Edenton St, Raleigh 27603 834-4707.
Jill A. Spooner, Director
Needs food (non-perishables), magazines and reading materials.

Vietnam Veterans Pickup Service, 2409 Crabtree Blvd, Raleigh 27604 832-8387
No large appliances. Needs small appliances (can repair). Pickup available.

Wake County Opportunities, Inc, 567 East Hargett St, PO Box 28105, Raleigh, 27601
833-2885/2886 Dora Newkirk
Transition house for the homeless. Accepts good mattresses and box springs.
Can't repair appliances. Needs furniture, kitchen items (especially dishes and
silverware), clothing (large sizes).

Wake Forest Crisis Ministry, 126 West Owens St, Wake Forest 27587 556-7144
Accepts clothes, food (including fresh), small household items. No storage facilities (call). Maintains a client needs list. No pickup available.

Western Wake Crisis Ministry, 105 East Chatham St, Apex 27502 362-0657
Accepts mainly clothing, food (canned, dried), small appliances. Can't repair appliances. Very limited storage. Needs men's shoes. Maintains a client needs list. Call about pickup.

NOTE: During the Christmas Season many organizations have special collection drives.

Eyeglasses

Lions Club International of Raleigh, 315 Hubert St, Raleigh 27603 833-8611

Eyeglasses (old lenses and frames), year-round.

Drop-off box in Sears, Crabtree Valley Mall (ask for location).

Drop-off at Brown Wynne Funeral Homes, Administration Office,
716 West North St, Raleigh 831-4600 or locations at

300 St. Mary's St, Raleigh 828-4311

1701 East Millbrook Rd, Raleigh 876-6900

200 East Maynard Rd, Cary 467-8108

1201 North Arendell Ave, Zebulon 269-9377

1700 South Main, Wake Forest 556-1565

Indicate that the glasses are for the Lions Club.

Lions Club members will often pick up multiple pairs of glasses from your home, call.

Lions Club International and Lens Crafters "Give a Gift of Sight" Program

Eyeglasses collected during the Christmas Holidays.

Drop-off at Lens Crafters locations:

4217 Six Forks Rd, North Hills Mall (across from Ivey's/Dillard's),
Raleigh 783-7150

Cary Village Mall (main entrance near Hudson Belk) at Walnut and
Maynard Rds, Cary 460-0155

Other

Consider reusing items or donating them to:

- Arts and crafts centers
- Civic and church groups - bazaars, garage and yard sales
- Friends of the Library Book Sale
- Friends and relatives
- Jails, correction, and detention centers (magazines)
- Libraries (books and periodicals)
- Nursing homes and waiting rooms (magazines)
- Pre-school, day care centers, church classes
- Used bookstores and swaps (sell or trade books and magazines)

CURBSIDE RECYCLING PROGRAMS

Basic Service: Aluminum Beverage Cans, Glass, and Newspaper

Weekly or biweekly coverage of single family homes.

Basic Collection Service:

Aluminum beverage cans - should be rinsed and preferably crushed.

Glass - food and beverage bottles and jars (clear, green, and brown) should be rinsed, lids or caps removed (labels OK).

Newspapers - (inserts OK) should be clean with no other types of paper mixed in.

Additional Material Collection (as noted):

Glass - blue glass bottles, rinsed, caps or lids and metal rings removed (labels are OK).

Plastic (HDPE #2) milk and water jugs - (nonpigmented), rinse, remove caps, and crush/flatten containers.

Plastic (PETE #1) soda bottles - (clear and green), rinse, remove caps, and crush/flatten containers.

Steel/bimetal beverage cans - rinsed.

Steel/tin food cans - rinsed with the tops placed inside the cans (labels are OK, pet food cans OK, but no jar lids).

Several of these municipalities are participating in a pilot mixed plastic bottle collection sponsored by the Council for Solid Waste Solutions and organized by the Triangle J Council of Governments. This program is scheduled to begin March 1992.

An information number and the name of the contractor working for each town are provided.

Apex (362-8661) Also collects aluminum products (scrap), steel/bimetal beverage cans, soda bottles, milk jugs, and magazines.
Contract is with Waste Removal Service of Smithfield.

Cary (469-4090) Blue glass is accepted.
All Cary homes should have curbside by April 1992. Contract is with Sun Shares of Durham. Two recycling regions [3 & 11] consisting of 3000 residences are participating in a one year pilot program for mixed plastic bottle collection.

Fuquay-Varina (552-3178) Also collects steel/bimetal beverage cans, steel food cans, plastic soda and milk jugs. Service provided for 1700 homes and multi-family units. Contract is with BFI.

Garner (772-4688) Also collects steel/bimetal beverage cans, plastic soda and milk jugs. Service provided for 855 homes. Contract is with Waste Industries of Raleigh. The town (5000 residences) are participating in a one year pilot program for mixed plastic bottle collection.

Holly Springs (552-6221) No curbside, relies on the Wake County igloos site there.

Knightdale (266-9291) Also collects steel food cans, plastic soda and milk jugs.
Contract is with Residential Refuse Removal of Apex, serving 800 homes.

Morrisville (469-1426) No curbside, rely on Wake County Container Site there.

Raleigh (890-3070/3400) Also collects steel/bimetal beverage cans, plastic milk and soda bottles and steel/tin food cans. Blue glass is accepted.
Curbside collection is overseen by Raleigh Public Works Department. Full residential coverage should be possible by 1992.

Rolesville (556-3506) No curbside, relies on the Wake County igloos site there.

Wake Forest (556-1331) Should have a program by mid-1992.

Wendell (365-4444) Considering a program for the new fiscal year. Call for details.

Zebulon (269-7455) Also collects steel/bimetal beverage cans, steel food cans, plastic soda and milk jugs. Contract is with BFI.

Christmas Trees

By 1993 most municipalities and counties should have some yard debris/composting program implemented to divert these materials from the landfill. Trees should be stripped of all decorations, metal, wire, and have their stands removed before recycling. These trees are chipped, and the resulting mulch is used in city parks or made available to the public (late Dec through mid-Jan). Check local papers for collection schedules or call your Public Works Department for more details.

Apex (362-8166) collects (after 12/25) as part of normal trash pickup and delivers to Jordan Lake for reef construction.

Cary (469-4396/4387) collects (first two weeks in January) as a special collection. Used in the parks.

Fuquay-Varina (552-3178) collects (after 1/1) as needed and landfills the trees.

Garner (772-7600) collects (during first week of January) as part of normal trash pickup.

Holly Springs (552-6221) No collection.

Knightdale (266-9291) collects (every Wednesday after 1/1) as a special collection.

Morrisville (469-1426) No collection.

Raleigh (831-6446) collects (after 1/1) as a special collection.

Rolesville (556-3506) No collection.

Wake Forest (556-2024) collects on designated days (usually two) in January and carries trees to Tyler Park for chipping. Used in landscaping the parks.

Wendell (365-4444) collects (after 1/2) as part of normal trash pickup.

Zebulon (269-7455) collects (after 1/2) as part of normal trash pickup.

See **Christmas Trees** under drop-off sites.

See **Yard Waste**.

Furniture/Furnishings (brown goods)

After attempts to reuse or donate these items to charity have been tried, household furnishings and furniture can be collected as a "special load" pickup in several communities.

Raleigh Street Maintenance will collect as a "special load" for a \$30 fee. Payment must be made in advance to the Revenue Collections Office, PO Box 590, Raleigh, NC 27602 or brought to room 118, Raleigh Municipal Building, 222 West Hargett St, Raleigh, M-F between 8:30 and 5:15pm.

Wake Forest (556-2024) plans special Friday pickups for a \$20 fee.

Leaves

Leaves are usually picked up on a rotating schedule during the collection period. By 1993 most municipalities and counties should have a yard debris/composting program implemented to divert these materials from the landfill. Check local papers for collection schedules or call your Public Works Department for more details.

Fall leaf pickup/delivery (usually Nov-March) is to municipal leaf piles (see below) or residences (upon request) within the city limits. Call for scheduling or to arrange delivery in the fall. Leaves raked outside this period should be either bagged or boxed.

NOTE: Leaves make an excellent soil amendment and mulch in natural areas, woodlots, and in the landscape plantings. Seriously consider using them to your advantage and not discarding them. Your Cooperative Extension Service can advise you.

Apex (362-8166) leaf pickup/delivery.

Cary (469-4396) leaf pickup/delivery.

Fuquay-Varina (552-3178) leaf pickup.

Garner (772-7600) leaf pickup.

Holly Springs (552-6221) No collection, residents allowed to burn.

Morrisville (469-1426) No collection, residents allowed to burn.

Raleigh (831-6446) leaf pickup/delivery.

Rolesville (556-3506) No collection.

Wendell (365-4444) leaf pickup (Mondays only).

Wake Forest (556-2024) leaf pickup.

Leaf Mulch pile locations in past years have been:

Garner - Wastewater Treatment Plant
Raleigh - Intersection of Trawick and New Hope Rd
Raleigh - Marsh Creek Park Maintenance Center
Raleigh - Lions Park
Raleigh - State Fair Grounds near Horse Complex
Wendell - South end of Wendell's waste treatment plant.

BFI Yard Waste Facility, Old Holly Springs Apex Rd in Holly Springs 557-0519 will accept grass, brush, leaves, limbs, and trees for a fee.

See **Yard Waste**.

Limbs and Brush - Yard

By 1993 most municipalities and counties should have a yard debris/composting program implemented to divert these materials from the landfill. Some municipalities require that the material be cut to certain lengths and bundled, bagged or boxed. Check local papers for collection schedules or call your Public Works Department for more details on preparing yard waste for pickup.

Apex (362-8166) sanitation crews usually collect yard debris once a week as part of weekly curbside trash pickup. Limbs placed at the curb must be cut to a designated length.

Cary (469-4396) sanitation crews usually collect yard debris once a week as part of weekly curbside trash pickup. Limbs placed at the curb must be cut to a designated length (18-24 inches) with no one piece exceeding 4 inches in diameter.

Fuquay-Varina (552-3178) sanitation crews usually collect yard debris once a week as part of weekly curbside trash pickup. Limbs placed at the curb must be cut to a designated length.

Raleigh (831-6446) sanitation crews usually collect yard debris once a week as part of weekly curbside trash pickup. Limbs placed at the curb must be cut to a designated length and often bundled.

Raleigh Parks tree crews chip limbs and brush as it is collected.

Raleigh (831-6446) Street Maintenance will pick up tree limbs up to 6" in diameter and 5 feet in length as part of "Special Load" pickup for a \$30 fee. Not collected include bricks, lumber, building material, furnaces, rolls of carpet, rocks, dirt or storage buildings. These items can be disposed of at the City and County Landfills. Call the Sanitation Division (919) 831-6890. Payment must be made in advance to the Revenue Collections Office, PO Box 590, Raleigh, NC 27602 or brought to room 118, Raleigh Municipal Building, 222 West Hargett St, Raleigh, M-F between 8:30am and 5:15pm.

Wake Forest (556-2024) plans to arrange special Friday pickup for a \$20 fee [diameters up to 6", length should not exceed 6 feet; greater than 6" diameter, lengths must be cut to 2 feet]. Call your Public Works Department for details.

BFI Yard Waste Facility, Old Holly Springs Apex Rd in Holly Springs 557-0519 will accept grass, brush, leaves, limbs, and trees for a fee.

See Yard Waste and Limbs and Brush under drop-off sites.

Oil - Used Motor

Cary (469-4396) picks up used oil curbside as part of its weekly curbside trash pickup and recycles it. Place oil in a closed, clearly labeled plastic container. Call Public Works to make sure you get on the list to be picked up that day.

Telephone Books

Cary (469-4396) collects telephone books as part of its weekly curbside trash pickup (usually during February) and recycles them through the Wake County Program. Citizens in other areas should take their books to the nearest drop-off site.

See Telephone Books under drop-off sites.

White Goods/Appliances

Appliance dealers will often take the old model when a new one is purchased. If these items can't be repaired or donated (see **Organizations Accepting Usable Items**), then several towns offer residential pickup from curbside. It is cheaper to carry the item to a transfer station or the landfill yourself. Call your Public Works Department for more details.

Apex (362-8166) picks up appliances for a fee (small-\$18, large-\$50).

Cary (469-4090) will pick up for \$20 (prepayment or signed form for billing purposes is required).

Fuquay-Varina (552-3178) pick up large items at curbside.

Garner (772-7600) pick up large items at curbside.

Raleigh (831-6446) Street Maintenance will collect as a "special load" for a \$30 fee. Payment must be made in advance to the Revenue Collections Office, PO Box 590, Raleigh, NC 27602 or brought to room 118, Raleigh Municipal Building, 222 West Hargett St, Raleigh, NC, M-F between 8:30am and 5:15pm.

Wake Forest (556-2024) for a \$20 fee can pick up as part of its special Friday pickups.

Yard Waste

To meet the 25 percent waste reduction mandated by North Carolina, yard waste will be banned from Wake County landfills beginning January 1993. Wake County has designated five wood-waste and yard-waste landfills where materials collected will be processed into mulch or compost products. Every homeowner is encouraged to establish their own recycling/composting program using yard waste generated on their own property.

BFI Yard Waste Facility, Old Holly Springs Apex Rd in Holly Springs 557-0519 will accept grass, brush, leaves, limbs, trees, stumps, rocks, for a fee.

See also Christmas trees, limbs and brush, and leaves. Expect to see changes in the way curbside collections are handled as municipalities try to reduce waste and costs.

PRIVATE/COMMERCIAL RECYCLERS

American Metal and Parts Company, Inc, PO Box 17671, Route 2, Raleigh 27619
772-6527 Richard Rogers, President.
Buy-back: aluminum, automobiles, auto parts, copper, red metals, and white metals.

BFI (Browning-Ferris Industries), Recycling, 700 Freedom Dr, Raleigh 231-8201
Residential 772-5613 or 1038 Harvest Rd, Durham 27704
Outside of Durham (800) 234-2417
Tim Morris, Recycling Coordinator/Marketing Manager
Curbside program contracts, roll-offs, drop-off sites, some promotional information. Operate a yard waste facility in Holly Springs, Old Holly Springs Apex Road (SR1153) 557-0519. Open M-F 7:00am-5:00pm; Sat 7:00am-2:00pm. Minimum fee of \$10.00 per load for yard wastes including grass, leaves, limbs, stumps, rocks, untreated and unpainted wood, concrete, bricks and asphalt.

Carolina Lazer Cartridge, 1127 Cedarhurst Dr, Raleigh 850-0288
Recycled laser cartridges and ribbon re-inking.

Douglas, Francis, Efland, NC 563-1192 or 477-9833 (w)
One person, part-time operation for residential customers, apartments, and churches in parts of Wake, Durham, and Orange Counties. Assists businesses in starting recycling, provides educational materials.
Pickup: beverage cans, tin cans, plastics (HDPE and PETE), glass, newspaper, bond and copy paper, mixed paper, corrugated cardboard.

Dura-Line, 975 Walnut St, Suite 262, Cary 27511 460-9370
Manufactures and distributes new and recycled printer supplies.

Eastern Waste Paper Company, S.R. 1701, Rt 1, Box 260, Wendell 27591 365-9380
Don Pulley, President
Buy-back: computer print-outs, office waste paper (of all types), corrugated cardboard, IBM cards (no carbon, newsprint, or magazines).
Open M-F 8:00am-5:00pm. Pickup available for large tonnage, by contract. Serves medium and large businesses.

ECOS, Inc, Rt 6, PO Box 261, Chapel Hill 27514 967-3676 Larry Kehrer, Director
Services drop-off sites and business pickup. Service area includes Chatham, Durham, Orange, and Wake Counties for aluminum cans, glass, and newspaper.

Environmental Recovery Corporation, NC 55 Hwy near Carpenter 469-1334, 881-4163, or (800) 273-5675. Recycling of waste wood and forest products. Land clearing debris processed and turned into mulch, landscape materials, or boiler fuel (retail/wholesale). Serves the Triangle Area with five locations.

Environmental Recycling, Inc., 212 Westgate Rd (off Hwy US 70 near Angus Barn),
Raleigh 27613 881-4163 Lynn Daniels, Plant Manager.
No longer open to the general public as a dropoff site. Company is moving most of
its operation to Greensboro, but will still buy from area recyclers/brokers.

Grimes Control Cleaning Service, 1010 Hammell Dr, Raleigh 833-3777
Collects paper and aluminum from small and large businesses.

HI-CONE, Division of Illinois Tool Works, Inc, Hwy NC 97, Zebulon 269-9634
Collects LDPE #4, six pack rings through the Wake County Elementary Schools.
Projects supported by Keep America Beautiful of Wake County.

Hollmet Recycling Corporation, 8828 Hwy 64 East, PO Box 550, Knightdale 27545 266-3694
or 231-1300. Graham Holland, President; Benny Honeycutt, Manager.
Buy-back: aluminum beverage cans, aluminum scrap, car batteries, scrap iron,
copper, brass, steel beverage cans, tin cans, automobiles (no appliances).
Open M-F 8:00am-4:00pm; Sat 8:00am-12:00pm.
Loader service available for large tonnage.

HT Debris and Recycling, PO Box 52043, Raleigh 27612 790-4076
Commercial and residential service. Pallets, scrap and salvage recycling,
equipment removal and hauling; tree, wood and debris removal.

Joher Tiltens Truck and Auto Parts, Poole Rd at the Neuse River 266-2704 or (800) 222-9721
Buys junk cars.

Just Laser, PO Box 13545, Research Triangle Park 27709 787-3245. Laser cartridge
recharging specialists.

K and L Scrap Service, Inc, PO Box 2067, 2310 Old Garner Rd, Raleigh 27602 828-5426
Buy-back: aluminum and steel beverage cans, scrap ferrous and non-ferrous
metal, cast iron, copper, brass, steel, car batteries, and automobiles.
Drop-off/no pay: glass (separated by color). Open M-F 8:00am-4:30pm.
Pickup available for large tonnage items.

Landfills

Feltonville - NC 55 387-2126
North Wake - 10208 Durant Rd 847-2035
Wilders Grove - 4120 New Bern Ave 231-6381

Laser Recharge of Carolina, 108-C Woodwinds Industrial Ct, Cary 467-5902 or
(800) 825-0664. Toner cartridge specialists (new and recharge for laser printers
and Canon PC).

Laser Renew, 1702 Laughridge Dr, Cary, NC 380-1613
Recharge toner cartridges.

Martin's Auto Parts, 5810 Poole Rd, Raleigh 231-6416 or 231-8086
Buys junk automobiles, junk dealer.
M-F 8:00am-5:00pm; Sat 8:00am-12:00noon.

MER Recycling, Inc, 813 Ellis Rd, Durham 27703

598-5795 Jim and Jill Matlack, General Managers

Buys back (at Ellis Rd site): Scrap metals (ferrous and nonferrous) including aluminum beverage cans, aluminum scrap/foil, steel beverage cans; tin cans, brass, copper, steel, lead, iron, tin, and radiators.

Drop-off/no pay: polystyrene packing peanuts (clean, no contaminants), and polystyrene container (foam or crystal forms). No other plastics accepted (except industrial grade).

Buy back: high grade paper, computer, colored, white bond, and office blend.

Accepts for recycling with a charge per individual carload/dropoff: mixed paper, corrugated cardboard, paper board, magazines, and junk mail. During office hours only M-F 8:00am-4:00pm.

The N & O provides a bin for newsprint only at this location. 24 hrs

MER does pickup service in Durham, RTP, Orange, and Wake for businesses and institutions. Paper, glass (all colors), food service polystyrene, metals, and plastics collected under contract.

Company will focus on industrial plastics in the future.

Morris Recovery Systems, Inc (MRS), 819 Purser Dr, Raleigh 772-7924
Silver recovery.

The News and Observer Newspaper Recycling Center, Martin St (between McDowell St and Salisbury St), 215 South McDowell St, Raleigh 27602 (919) 829-8903,
Danny Collins.

Drop-off/no pay: newspaper. M-F 6:00am-3:00pm; Sat 8:00am-3:00pm.

Have also placed collection bins at various locations throughout the county.

See Newspapers. NOTE: The inserts should be removed before recycling the newsprint because these newspapers will be used to make mulch and animal bedding. Bales sold at this location.

Norwake Sanitation, Inc, 3209 Greshams Lake Rd, PO Box 6556, Raleigh 27628 876-6755
Residential service along with garbage pickup. Offers customers twice monthly pickup for aluminum cans, glass, newspaper, tin cans, and plastic milk and soda bottles.

Omni Battery Company of NC, 3216K Wellington Court, Raleigh 27615 876-2230
Buy-back: batteries - lead-acid. Open M-F 8:00am-5:00pm.

Orange Recycling Services, Inc, 1106 Ridgewood Lane, Chapel Hill 27514 929-8620
Kurt T. Uphoff, President; A. Michael Swartz, Assistant Manager
Waste stream analyses, business and institution recycling programs.
Services counties surrounding the Park.

Paper Stock Dealers, Inc, 666 Maywood Ave, Raleigh 833-9783. Larry Blankenhip, Manager; Sandra Boykin, Office Manager. Serving Wake, Johnson and Franklin Counties.

Buy-back: office grades of paper, computer, ledger, newspaper, corrugated cardboard (prefer 300 lb minimum on paper).

Pickup/no charge/no pay: corrugated cardboard and office paper

Drop-off/no pay: small volumes of office paper, computer, ledger, newspaper, corrugated cardboard. Magazines, junk mail (no food boxes, catalogs or waxed paper). May not be accepting low-grade paper due to low market value - call.

Open M-Th 7:30am-12:00noon and 1:00pm-4:00pm; F 7:30am-12:00noon and 1:00pm-3:30pm.

Phoenix Resources, 6021 Triangle Dr, Raleigh, NC (919) 787-0883 Liz Cave, Administrative Director; Jonathan Bograd, Operations Director. Collector and distributor of recycled paper.

Recycling broker for businesses and institutions, will help companies by setting up recycling programs, identifying and developing markets (some consulting and promotion). Pickup: aluminum beverage cans, high-grade paper, office blend paper (minimum 1000 lbs/week).

Residential Refuse Removal Service, Rt 3, SR 1733, Box 232A, Apex 27502
362-1481 Chip Warren, Vice President
Contract for curbside recyclable pickup in Knightdale.

Reynolds Aluminum Recycling Center, off-street customer center, 1617 Capital Blvd, Raleigh 27604 834-5479 or 832-8178 (taped message), 833-3055 (questions) or (800) 228-2525 (prices) or 831-8178
Buy-back: aluminum beverage cans, aluminum scrap, copper, brass, and radiators. Open T-F 8:30am-5:00pm; Sat 8:30am-4:30pm.
Reynolds no longer has the mobile Recycling Trailer Sites in Wake.

Rick's Garbage Service, 507 Woodland Rd, Raleigh 779-3329 or 850-8644
Richard H. Fleming, President
Contracts with Morrisville, western Wake County customers, Raleigh apartments. Picks up aluminum, bimetal beverage cans, aluminum scrap (foil and pie tins), glass, and newspaper.

Rigsbee Auto Parts, Hwy 55, Apex 362-8397
Hwy 64 East, Raleigh 266-3333 or 266-1172
Buys scrap metal and auto parts.

Southern Case, Inc, 2315 Laurelbrook St, Raleigh 27611 821-7683 or 821-0877
Plastics processor. Carolyn Furr, Personnel Officer.
Drop-off: plastic HDPE containers (pigmented and nonpigmented), rinsed and labels removed. Included are any household products like milk, water, shampoo, detergent bottles. Excluded are antifreeze and oil containers.

Sun Shares, 1215 South Briggs Ave, Suite 100, Durham, NC 27703 (919) 596-1870 or (800) 277-1990 Dave Kirkpatrick, Director; Karen Smith, Commercial/Compost Program Manager; Sara Maulsby, Education and Communications Manager; Peter Somers, Energy Program Manager; Abrilla Robinson, Curbside Program Manager.

Curbside collection, business pickup, services drop-off sites, information (maps and guides). Also energy programs, composting, newsletter, research projects (mixed paper markets, and co-composting), and community programs and partnerships.

Toner Solutions, 600 East Chatham St, Cary, NC 27511 467-3470
Recharge laser and printer cartridges.

Triangle Charge, PO Box 31126, Raleigh, NC 27622 782-0229 Bill Fraser
Recharges toner cartridges. Pick up service in the Triangle. No walk in service.

Triangle Recycling (mobile service) 740-9912. John Howe
Pickup under contract only: white, ledger, colored, computer and printout paper, copper and some steel.

T T and E Iron and Metal, Inc, 2001 Old Garner Rd, PO Box 554, Garner 27529 772-9190
Alfred Thompson, President 772-8704.
Buy-back: scrap iron and nonferrous metals (copper, bronze, brass), appliances (motor removed), tin (no cans), automobile bodies, car batteries, and lead.
Open M-F 8:00am-5:00 pm; Sat 8:00am-12:00noon.
Pickup arranged for large tonnage. Serves Wake, Johnson, Orange and Harnett Counties.

Wagner's Automotive, 4115 South Alston Ave, Durham 27713 544-1729 Pat Wagner,
Secretary. Buys automobile bodies. Serves Chatham, Durham, Orange, and Wake Counties.

Wake Auto Parts, 3620 Holly Springs Rd, Raleigh 832-0893 or (800) 458-6861
M-F 8:30am-5:00 pm; Sat 8:30am-2:00pm.

Waste Industries, 3949 Browning Place, Raleigh 27609 Corporate Office (Raleigh)
782-0095 Eddy Dick, Vice President, Sales and Marketing.

Waste Industries, Inc, 4901 Craftsman Dr, Raleigh 954-1800, Recycling Facility
Chuck Saylor, Recycling Coordinator or 876-9250
Solid waste management, contracts, curbside programs.
Pickup only (contract customers): office paper: non-laser computer, white copy and bond, mixed paper, aluminum beverage cans (mobile shredder).
Sales/Distributor (contract customers): recycling equipment and office accessories. Operates a mini-MRF in Garner. May lease a mobile drum chipper and participate in yard waste recycling.

Waste Industries, Inc, 3741 Conquest Dr, Raleigh 27609 662-7100
Operations Center for residential and commercial waste hauling.
Services roll-off recycling sites in Fuquay-Varina and Wake Forest.

Waste Removal Services of Smithfield, Smithfield 934-2645
Curbside recyclable collection for Apex.

Waste Solutions Company, 10200 Durant Rd, Raleigh 846-0645
Scrap tire disposal.

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**A Proposal for Regionally Coordinated
Household Hazardous Waste Programs
in Chatham, Durham, Orange,
and Wake Counties**



**From The Triangle Region
Solid Waste Planners Committee**

M a r c h 1 9 9 3



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**From
The Triangle Region
Solid Waste Planners Committee**

M a r c h 1 9 9 3

**Triangle Region Solid Waste Planners
Committee Members**

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Public Works Director
County of Chatham

Tom Bastable
Assistant Sanitation Director
City of Durham

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Solid Waste Director
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Town of Chapel Hill

Bill Renfrow
Special Projects Manager
County of Durham

Michael Shore
Recycling Coordinator
County of Chatham



Printed on Recycled Paper.

A Proposal For Regionally Coordinated Household Hazardous Waste Programs in Chatham, Durham, Orange, and Wake Counties

I. INTRODUCTION

Households may be the largest generators of hazardous waste in the United States: hazardous waste makes up 2 to 4% of the 200 million tons of waste landfilled every year in the United States, and household hazardous waste (HHW) accounts for one-quarter to one-half of this amount. An average household discards 21 pounds of hazardous waste per year, and it is estimated that the average home contains between 50 and 100 pounds of accumulated hazardous waste. (Dana Duxbury & Associates, Andover, MA 1990.)



Hazardous home products such as drain cleaners, swimming pool chemicals, metal polishes, pesticides, and automotive and paint products can be a threat to public safety and the environment if not properly handled and disposed of. HHW tossed in the trash can or down the drain can create problems such as safety hazards for trash collection and landfill crews, ground-water contamination, and an increased burden on sanitary sewer and wastewater treatment plant operations.

In communities across the country, special HHW collection programs have been created to provide for the diversion of household-generated toxic wastes that

do not belong in sanitary landfills or in sewer systems. The total number of such programs in the United States grew from 2 programs in 1980 to approximately 1,000 in 1992. Most of these collection programs are of the traditional one or two days per year "collection days" type, but there is a recent trend toward establishing permanent collection facilities. The number of permanent collection facilities in the United States increased from 39 in 1989 to 128 in 1992.

In the Triangle region (which includes the counties of Chatham, Durham, Orange, and Wake for purposes of this report), the City of Raleigh, Wake County, and the City of Durham have sponsored successful single-day HHW collection programs once or twice a year during the past four years. The Orange Regional Recycling Program has also held one limited HHW collection program.

In early 1992, solid waste planners from local governments within the above four Triangle-region counties began attending a series of meetings sponsored by Triangle J Council of Governments to discuss the development of permanent household hazardous waste collection facilities in each of the four counties. Two significant factors led this group, the Triangle Region Solid Waste Planners Committee, to examine permanent facilities and a regional cooperative effort: the high cost of the current programs and the low amount of materials currently collected in these programs.

The focus of the Committee's inquiry was on the potential cost savings from a coordinated disposal schedule whereby a single contractor would periodically pick up HHW from several permanent sites within the region. These sites would be open and accepting HHW from county residents on a regular basis two or more days per month. This document is a report of the Committee's findings and recommendations.

Continued

II. CURRENT HHW COLLECTION PROGRAMS WITHIN THE REGION

A. Wake County

The City of Raleigh initiated a program to collect HHW in 1989. It held a one-day collection day in the spring and another one in the fall. In 1990 it joined forces with Wake County, and the two have co-sponsored county-wide one-day collections each spring and fall since then.

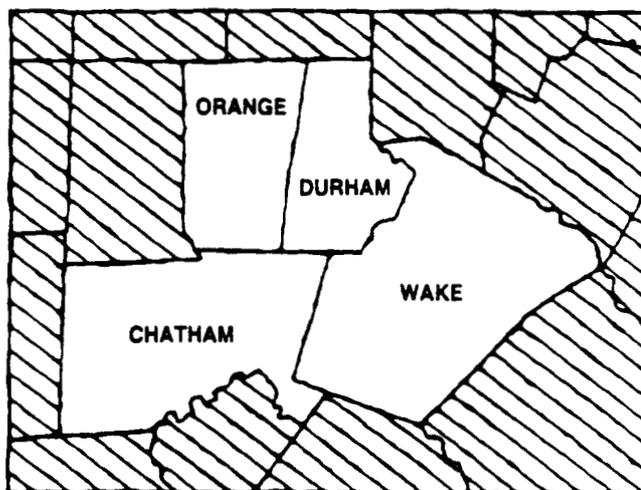
During the 1991-92 fiscal year, 4,320 people dropped off HHW during the two City of Raleigh/Wake County collection days. At an annual cost of \$378,575, the program cost an average of \$88 per participant and \$2.08 per pound of hazardous material disposed of. In addition to hazardous materials, used oil, latex paint, and lead-acid batteries were collected and recycled.

The HHW collection days in Wake County have achieved a high level of participation and a low cost for programs of this type. However, only 2.6% of the estimated 165,743 households in the county are currently participating in the collection program. In a survey at the spring 1992 collection day, participants were asked for comments, and 35% volunteered that they would prefer more frequent collection opportunities.

B. Durham County

The City of Durham has conducted three one-day HHW collection events since November 1990, and these collection days have been open to all residents of Durham County. The County has helped provide technical assistance but has not provided funding for these events. There is one collection event planned for fiscal year 1992-93.

The two collection days held during fiscal year 1991-92 served 878 participants, just over 1% of the households in Durham County. At an annual cost of \$140,612, the program cost an average of \$160 per participant and \$1.98 per pound of hazardous material disposed of. Latex paint was also collected during these two days, and Habitat for Humanity helped separate usable paint for use in its program.



C. Orange County

The Orange Community Recycling Program sponsored one very limited, invitational HHW collection day in the spring of 1992. Invitations were issued to 80 people who had responded to a survey in the fall 1991 issue of the *Orange Solid Waste News*. Thirty participants came to the collection event, at which materials were recycled locally in an informal waste exchange among citizens. The 30 participants represented less than one-tenth of 1% of the households in Orange County.

The Orange Community Recycling Program also collects used motor oil, kerosene, diesel fuel, Coleman fuel, gear oil, and transmission fluid once a month at a different location in Orange County. Beginning in the spring of 1993, there will also be a latex paint exchange for Orange County citizens and businesses.

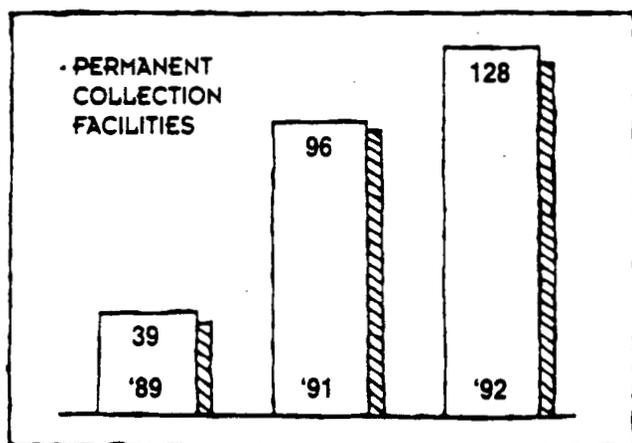
D. Chatham County

Chatham County offers a limited HHW collection program covering only motor oil and lead acid batteries.

III. THE TREND TOWARD PERMANENT COLLECTION FACILITIES

During the course of its ten-month study of permanent facilities throughout the United States, the Triangle Region Solid Waste Planners Committee compiled information on eighty-five programs in sixteen states.

The Committee as a whole toured one of the several permanent HHW collection sites operated by the Southeastern Public Service Authority headquartered in Chesapeake, Virginia. Individual Committee members also toured other permanent facilities (those in West Palm Beach County, Florida; Santa Monica, California; and Hennepin County, Minnesota) and attended a statewide conference in North Carolina and the 1992 National HHW Conference sponsored by the U.S. Environmental Protection Agency. The Committee also co-sponsored with Triangle J Council of Governments a one-day workshop in July 1992 on permanent HHW facilities at which experts shared their insights with Committee members.



The Committee has concluded that there is a nationwide movement away from one-day HHW collection events and toward permanent HHW collection facilities. This conclusion echoes a 1989 prediction by the Massachusetts Office of Safe Waste Management, which helped fund and then analyzed 59 collection programs in Massachusetts, and which stated in its analysis, "[A] statewide program of one-day collections is an interim measure for household hazardous waste management Permanent collection centers may meet the collection and disposal needs of households ... by providing a consistent and more cost effective method of management." By 1992, 128 communities in the United States provided regular HHW collection through the use of a permanent collection facility – a dedicated facility open to the public at least once a month. Many of these communities had formerly collected HHW in

one-day collection programs and had decided to set up a permanent facility so as to provide more effective collection.

There are two main reasons that communities have switched to permanent facilities:

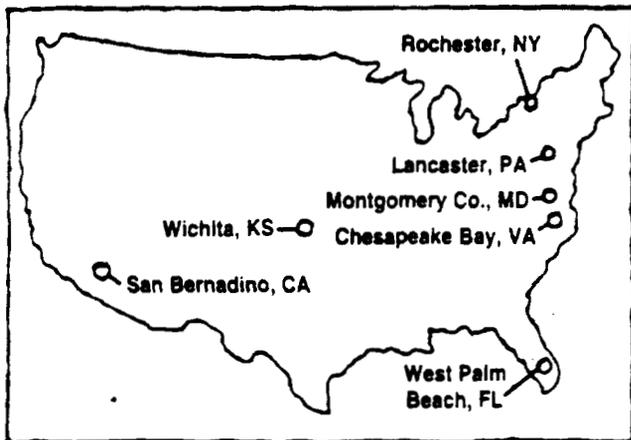
- (1) greater public access means more material will be captured by the program;
- (2) the ability to store and consolidate material means lower costs per unit of material disposed.

Several examples from communities with populations and/or service areas somewhat comparable to that of the four-county Triangle region (which has a population of 738,000 in 2,260 square miles) illustrate the above point:

- *In West Palm Beach, Florida* (population 900,000 in 3,000 square miles), participation and the amount collected both more than doubled when the program switched from twelve one-day events per year to permanent collection. Both the disposal cost per participant and the disposal cost per pound collected dropped by about 36%.
- *In Rochester, New York* (population 702,000 in 629 square miles), switching from one one-day event per year to permanent collection increased participation by 45% but more than doubled the amount collected. The disposal cost per participant decreased 33%, and the disposal cost per gallon collected decreased 60%.
- *In the Southeastern Public Service Authority in Virginia* (population 1,000,000 in 2,000 square miles), participation almost quadrupled when the program switched from two one-day events per year to permanent collection. The amount collected more than doubled but was hard to quantify in any more detail because there was a difference in the paint collection systems used. Both the disposal cost per participant and the disposal cost per pound collected (excluding paint) significantly dropped.
- *In the Wichita/Sedgwick County area of Kansas* (population 400,000 in 1,100 square miles), a switch

Continued

from one two-day event per year to permanent collection boosted participation by more than six times; data on the amount collected was not available. The disposal cost per participant decreased 60%.



For more detailed cost information regarding the above examples, see Figure 1.

The more than one hundred permanent collection facilities in the United States are typically located at landfills, transfer stations, or other publicly-owned sites. A typical facility is open less than full-time, commonly on Saturday mornings. In some programs, one-day events are held at satellite locations, with the permanent facility serving as the hub. In San Bemadino, California; West Palm Beach, Florida; and the southern Chesapeake Bay area of Virginia, smaller satellite facilities have been built and are open on a rotating basis.

The permanent facilities generally fall into three categories: minimalist, intermediate, and full-service.

A minimalist facility has storage space but little or no space for bulking and lab packing, testing, office work, or setting aside for reuse. A number of the Florida facilities follow this model. For example, the Brevard County facility is a prefab storage container at a landfill, and most of the work can be done out of doors. There is a concrete pad in front, a prefab equipment shed, pallets outside for latex paint, and a fence around the site. Receiving and initial sorting is done by staff, and

a contractor consolidates, lab packs, and transports the waste.

The intermediate facilities have space for receiving and storage, some space for bulking and testing, and perhaps a nearby office. These facilities sometimes have storage space for fewer drums (12-20) than the minimalist (20-40), because part of the indoor space is devoted to work space. Ellis County, Kansas, for example, has a 10'x 20' prefab building with 14 drums stored along three walls and a work table on the fourth wall.

A full-service facility has indoor space for receiving, sorting, testing, bulking, lab packing, storage, office work, and setting aside for re-use. The 6,000- square-foot facility in Anchorage, Alaska is presently the largest example of this kind of facility.

The different types of buildings used for permanent facilities include prefabricated hazardous waste storage sheds, precast concrete storage structures, modified trailers, and new or retrofitted buildings.

Staffing arrangements range from staffing entirely by a hazardous waste contractor to staffing entirely by trained county or municipal employees who pack for pick-up by the disposal contractor. In an intermediate option, county or municipal staff are trained to bulk and lab pack some items under contractor supervision, and the contractor is responsible for identification of unknowns, the remainder of the lab packing, paperwork, and transportation.

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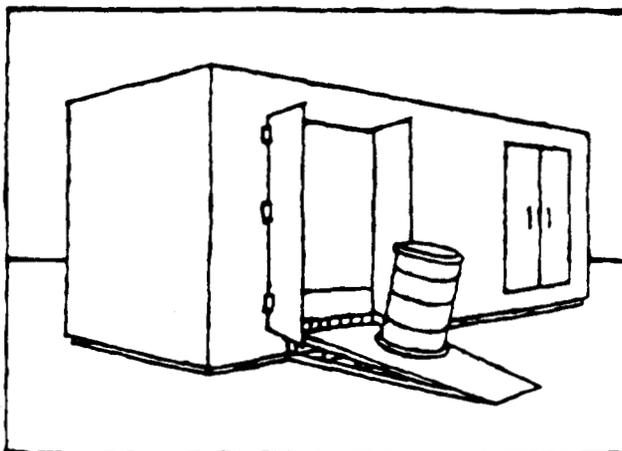


FIGURE 1
Examples of Costs from TJCOG-Sized Regions
Switching from One-Day to Permanent HHW Collection Programs

West Palm Beach Co., FL	<i>operating cost*</i>	<i># of participants</i>	<i>cost per participant</i>	<i># of pounds collected</i>	<i>cost per pound</i>
1987: 6 one-days	\$74,000	237	\$312/part.	65,000	\$1.14/lb.
1988: 6 one-days	\$157,804	1,050	\$150/part.	102,400	\$1.54/lb.
1989: 12 one-days	\$242,616	1,691	\$143/part.	187,170	\$1.30/lb.
1990-91 permanent	\$295,480	2,630	\$112/part.	287,020	\$1.03/lb.
1991-92 permanent	\$309,958	3,421	\$91/part.	383,268	\$0.81/lb.

Rochester, NY	<i>operating cost</i>	<i># of participants</i>	<i>cost per participant</i>	<i># of gallons collected</i>	<i>cost per gallon</i>
1989: 1 one-day	\$200,000	1,400	\$143/part.	13,130	\$15.23/gal.
current permanent	\$196,600	2,040	\$96/part.	32,430	\$6.06/gal.

Southeastern PSA, VA	<i>operating cost***</i>	<i># of participants</i>	<i>cost per participant</i>	<i># of pounds collected**</i>	<i>cost per pound**</i>
1987: 2 one-days	\$64,000	449	\$143/part.	19,000	\$3.37/lb.
1991-92 permanent	\$136,320	1,624	\$84/part.	38,000	\$3.59/lb.

Wichita/Sedgwick Co., KS	<i>operating cost*</i>	<i># of participants</i>	<i>cost per participant</i>	<i># of pounds collected</i>	<i>cost per pound</i>
1987: 1 two-day	\$38,000	325	\$117/part.	unavailable	unavailable
current permanent	\$100,000	2131	\$47/part.	110,000	\$0.91/lb.

* *Cost figures exclude cost of constructing permanent facility and are not adjusted for inflation; they include disposal contractor fees.*

** *1987 figures include paint packing; 1991-92 figures do not include paint.*

*** *Disposal contractor fees only.*

FIGURE 2
Examples of Permanent Household Hazardous Waste Collection Systems
in TJCOG-Sized Regions

	Palm Beach Co., FL. 900,000 pop. 3,000 sq. miles	Montgomery Co., MD. 800,000 pop. 500 sq. miles	Lancaster Co., PA. 425,000 pop. 946 sq. miles	Wichita/Sedgwick Co. KS. 400,000 pop. 1,100 sq. miles	Rochester, NY. 702,000 pop. 629 sq. miles	Southeastern PSA, VA. 1,000,000 pop. 2,000 sq. miles
Type of Bldg.	concrete bldg. plus 8x21 prefab satellite	20x20 canopy with cabinets plus mobile canopy	960 sq. ft. room w/in larger bldg. (too small, they say)	40x40 metal bldg. plus mobile sites such as hangar	20x60 metal prefab plus two 9x23 storage units	two 8x40 & two 8x20 metal prefabs (4 sites)
Gov't Staffing	3; they lab pack	1	1 full-time 2 part-time: they segregate materials	9 to 11; they help pack	1	5; they bulk
Hrs Open	W-F, 9-5 + 1 Sat am/mo.; satellite 1 Sat/qtr.	1 Sun/mo. (10-2) + 1 Sat/mo. mobile (10-2)	MW 9-7. T TH 9-12. F 9-3 + 2 Sat am/mo.	1 Sat/mo. (9-3) plus twice a year mobile	2 Stas/mo. (9-12:30); 1 Sat/mo. in winter	2 sites: 2 Sat & 1 W am/mo. 2 sites: 1 Sat/qtr.
Disposal pick-up	once every 2 mos.	contractor does all lab packing & picks up each time	once every 89 days; contractor does all lab packing	contractor helps w/ lab packing & picks up each time	once every 6 wks.; contractor packs ea. time, picks up later	once every 30 days; contractor packs when picks up + if unknowns
Contractor	Laidlaw	Clean Harbors Inc.	Laidlaw	US Pollution Control Inc.	Laidlaw	Chemical Waste Mgt.
Quantity	280,000 lbs/yr	80,000 lbs/yr	180,000 lbs/yr	70,000 lbs/yr	743 drums/yr	3,600 gals + 8,600 lbs/yr
Paint?	18% = latex which is re-used or dried	no latex	yes: bulked	latex re-used	no latex	latex re-used or bulked

A chart describing six permanent household collection programs in communities of a size similar to the Triangle area can be found in **Figure 2**.

In North Carolina, the Division of Solid Waste Management of the N.C. Department of Environment, Health, and Natural Resources encourages the establishment of permanent sites for HHW collection. In its Policy Memorandum #15, dated July 16, 1991, it states, "The Solid Waste Section encourages the establishment of permanent HHW collection sites at permitted solid waste management facilities."

IV. PROPOSAL FOR COORDINATION OF HHW COLLECTION IN THE TRIANGLE REGION

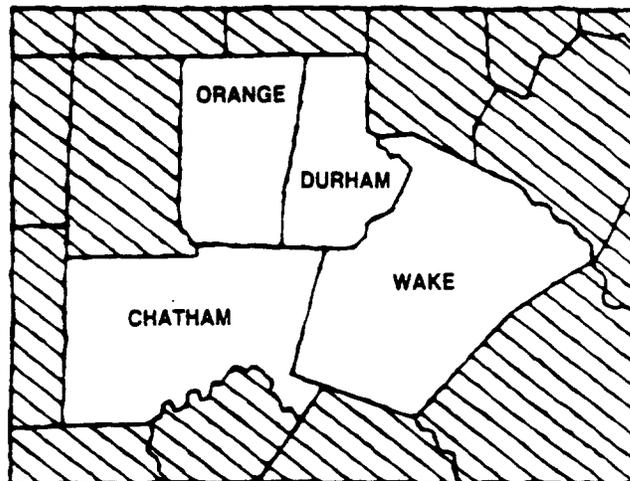
A. Overview

The Triangle Region Solid Waste Planners Committee has concluded that the use of permanent HHW collection facilities would likely increase the amount of hazardous material captured by HHW collection programs. Furthermore, by coordinating the disposal of HHW from permanent sites, the local governments in the region can realize cost savings per pound of disposed-of material due to the consolidation of like substances, the sharing of disposal contractor mobilization and transportation expenses, and joint bidding on equipment.

The Committee recommends that Chatham, Durham, Orange, and Wake Counties each site, build, and permit one or more permanent HHW collection facilities and jointly develop a HHW collection and disposal contract with a single contractor.

Although we cannot predict with accuracy the level of increase in hazardous material that would be collected by opening permanent collection facilities, statistics from other regions which have switched from one-day to permanent collection programs lead the Committee to believe that a significant increase will result. Committee members are aware of instances in this region where HHW was not brought to collection days due to schedule conflicts or an inability to save

material for the long period between collection days. It makes sense that creating more numerous opportunities for proper disposal will lead to the capture of more HHW.



During the course of its examination of HHW collection programs, the Committee on several occasions met and consulted with representatives from hazardous waste disposal companies. These companies were Advanced Environmental Technology Corporation (AETC), Chemical Waste Management (Chem Waste), and Laidlaw Environmental Services (Laidlaw). Two of these companies, AETC and Laidlaw, have handled single-day HHW collection events in Durham and Wake Counties. The third company, Chem Waste, is the provider of HHW disposal services for the permanent facilities operated by the Southeastern Public Service Authority in Virginia.

Representatives from all three of these companies acknowledged that individual local governments would save on per-unit disposal costs by switching to a permanent collection facility which could consolidate similar material and eliminate the problem of paying for numerous partially-filled containers of different types of hazardous material. Furthermore, over the long-run, local government staff could take over some or all of the packing responsibilities, thus saving additional money.

Continued

The disposal company representatives also agreed that coordinating the collection of material within the region would save all of the local governments money by eliminating duplicative mobilization and transportation fees.

Further cost savings are possible by jointly developing specifications and bidding on storage buildings and equipment. A preliminary estimate by one supplier of EPA- and OSHA-approved prefabricated storage buildings was that 5% could be saved by buying several buildings at once.

One additional reason for switching from single-day to permanent collection programs is that potential local government liability may be reduced. This is because any landfill or other site to which a local government brings its waste could possibly in the future end up as a Superfund site. In this admittedly unlikely event, the local government is in a better position vis a vis other responsible parties who must share the cost of clean-up if the local government can argue that it was doing everything possible to capture as much hazardous material as it could and its share of the cost should therefore be reduced. A permanent HHW facility is evidence of this good faith effort.

B. Start-up Cost Estimates Per County

The Committee has attempted to estimate some of the costs for each county associated with a regionally-coordinated permanent HHW collection program. The cost estimates below are based on figures from similar-sized permanent collection programs elsewhere in the country, on rough estimates by disposal contractors familiar with our region, and on analysis of past HHW collection days in our region. The figures below do not include the considerable staff time necessary for designing and permitting a permanent facility. For such a permit, the State of North Carolina requires a site plan and an operation plan which addresses safety, emergency, and contingency issues.

The following figures represent a minimum capital investment for one facility and assume a 5% cost reduction for the building and supplies due to joint purchasing.

One 8x8x40 EPA/OSHA approved prefabricated storage building	\$24,700
One concrete pad	\$8,000
Supplies (safety equipment, containers, signs, shelving, forms, etc.)	\$1,900
Utilities (electrical hook-up, water, telephone)	\$750
Total start-up costs per county	\$35,350

C. Annual Labor Cost Estimates Per County

There are two basic models for operating a permanent HHW collection facility once the facility is set up. One option is to contract with the disposal company to train local government staff to receive and lab-pack the hazardous material for the disposal contractor to pick up. The second option is to award a full-service contract whereby the disposal contractor performs all of these services, usually with one or more government staff members being present to help greet the public and receive the material.

The Committee concluded that either option would be an effective way of contracting with a disposal company, and further recommendations about which option is preferable would have to await responses to a request for proposals.

The following annual cost estimates for each county for the above two options are based on the assumption that each county's facility would be open two Saturdays per month. Local government staffing assumes two employees plus a supervisor three days per month; the full service contract assumes two contract employees plus one local government supervisor present three days per month.

Option One —local government staffing, including fringe benefits and overtime (based on Wake Co. Classification and Salary Schedule effective 7/1/92)	\$16,542
Option Two —full service contract (based on disposal contractor estimates)	\$30,000

D. Other Costs

The major cost in any HHW collection program is the disposal contractor's disposal fee. This depends upon the amount of material collected and the number of times the contractor comes to pick up the material. The Committee felt that this cost was too difficult to predict without the responses to a formal request for proposals that would articulate the specific needs of each county and the region as a whole. For the range of costs experienced by other permanent programs, see Figure 1.

V. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

The Triangle Region Solid Waste Planners Committee concludes that the establishment of at least one permanent collection facility in each of the four counties in the region — Chatham, Durham, Orange, and Wake — would likely increase the amount of HHW material captured within each county.

The Committee further concludes that coordinating the disposal of HHW from permanent sites would likely result in local government cost savings per unit of disposed-of material due to the consolidation of like substances, the sharing of disposal contractor mobilization and transportation expenses, and joint bidding on storage buildings and equipment.

The Committee recommends that the following action be taken by the governing body of each relevant local government in Chatham, Durham, Orange, and Wake Counties:

1. Commit to the concept of providing at least one permanent HHW collection facility in the county if such a facility appears cost-effective as a result of responses to a region-wide Request for Proposals for disposal services.

2. Approve the joint development of Requests for Qualifications and Requests for Proposals regarding (1) a coordinated disposal contract for HHW collected from permanent sites in Chatham, Durham, Orange, and Wake Counties; and (2) HHW storage buildings and equipment for permanent HHW facilities to be established during fiscal year 1994-95.

3. Authorize one or more representatives to serve on the Triangle Region Solid Waste Planners Committee for the purpose of developing and reviewing responses to the Requests for Qualifications and the Requests for Proposals and reporting back to the local government's governing body.

The proposed timetable for issuing and reacting to responses from Requests for Proposals appears in Figure 3.

A draft resolution regarding the foregoing recommendations appears in the Appendix.

Continued

FIGURE 3
Proposed Timetable for Regional Coordination
of Household Hazardous Waste Collection

Distribute Committee report and recommendations to local governments and get resolutions to issue joint RFQs and RFPs	April 1 - May 1, 1993
Issue joint RFQs	by May 15, 1993
Get responses back from RFQs	by June 15, 1993
Convene meeting of Committee to plan joint RFP	by June 28, 1993
Distribute draft of joint RFP to local governments	by July 30, 1993
Issue joint RFP	by August 30, 1993
Get responses back from RFP	by October 15, 1993
Convene meeting of Committee to review RFP responses	October 18, 1993
Send Committee recommendations to local governments	by November 15, 1993
Include Committee recommendations in 1994-95 local government budgets	by June 30, 1994

Appendix

Draft

**Resolution Regarding Regional Coordination
of Household Hazardous Waste Collection**

WHEREAS, many common household products such as oven cleaners, metal and furniture polishes, pesticides, drain cleaners, disinfectants, rug and upholstery cleaners, motor oil, transmission and brake fluids, and paints can be a threat to public safety and the environment if not properly handled and disposed of; and

WHEREAS, the average household discards 21 pounds of hazardous household waste per year, and

WHEREAS, the current household hazardous waste collection program in the City/Town/County of _____ captures only a very small percentage of the household hazardous waste disposed of by its residents; and

WHEREAS, permanent household hazardous waste collection facilities have been successful in other jurisdictions in greatly increasing the amount of household hazardous waste collected from residents; and

WHEREAS, short-term storage and consolidation of household hazardous waste at a permanent collection facility has enabled other jurisdictions to lower the disposal cost per unit of this material; and

WHEREAS, the sharing of disposal contractor mobilization and transportation expenses through a disposal contract coordinated with other local governments in the Triangle would likely reduce disposal costs for household hazardous waste; and

WHEREAS, joint bidding on household hazardous waste storage buildings and equipment with other local governments in the Triangle would likely result in cost savings; and

WHEREAS, the Triangle Region Solid Waste Planners Committee has conducted a ten-month study of permanent household hazardous waste collection facilities in the United States and produced a valuable report and recommendations for the Triangle region;

NOW, THEREFORE, BE IT RESOLVED that the City/Town/County of _____ supports the efforts of the Triangle Region Solid Waste Planners Committee to determine the cost-effectiveness of coordinated household hazardous waste collection from permanent collection facilities in the Triangle region; and

BE IT FURTHER RESOLVED that the City/Town/County of _____ authorizes the Manager to appoint one or more representatives to serve on the Triangle Region Solid Waste Planners Committee for the purpose of developing and reviewing responses to region-wide Requests for Qualifications and Requests for Proposals regarding

(a) a coordinated disposal contract for household hazardous waste collected from permanent sites in the region; and

(b) a joint bid on household hazardous waste storage buildings and equipment; and

BE IT FURTHER RESOLVED that, if a permanent facility in the Town/City/County of _____ appears cost-effective as a result of responses to region-wide Requests for Proposals for coordinated household hazardous waste disposal, the City/Town/County of _____ endorses the concept of establishing a permanent household hazardous waste collection facility within its jurisdiction.

This the _____ day of _____ 1993.

Notes