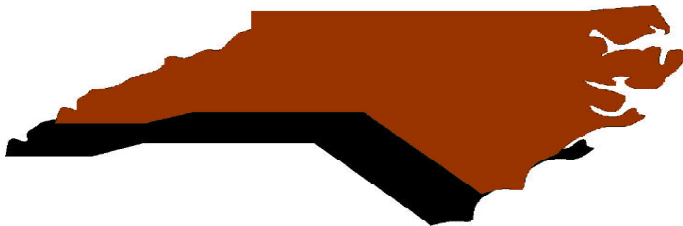




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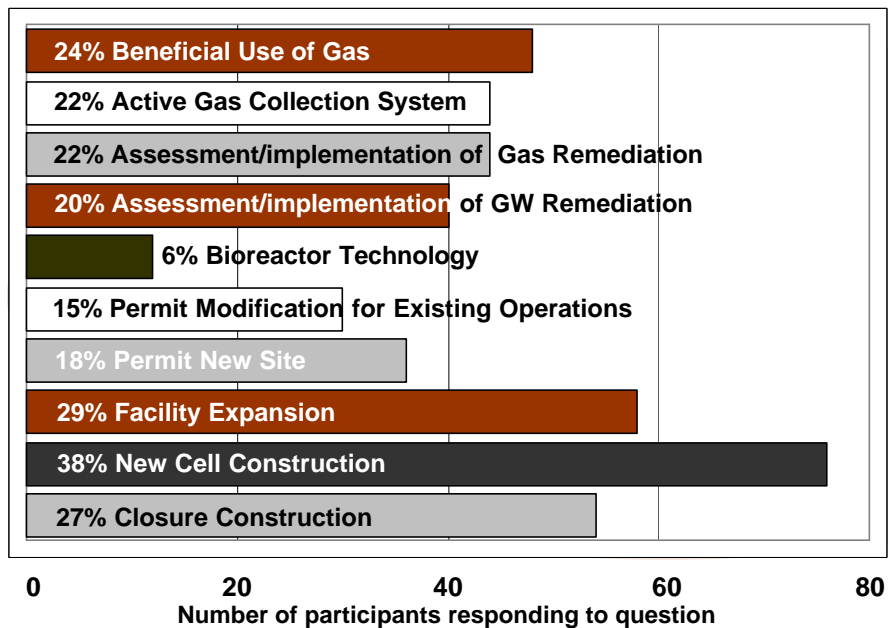
The Status of Solid Waste Management 2003

Draper Aden Associates proudly presents "The Status of Solid Waste Management - 2003", conducted for the three-state area of Virginia, Tennessee and North Carolina. Surveys were distributed to active facility permit holders in the region, to gather information relative to their costs and the types of programs utilized. We obtained a 20% response rate from a cross-section of rural and metropolitan localities, which gives us a good picture of current activities in the field.

Based on our survey, we find the methods used to manage solid waste have continued to evolve since 1992, prior to Subtitle D. Our earliest survey indicated an average tipping fee cost for the three states of \$24 and very few, rudimentary recycling programs. Today we see an established recycling industry and a mature waste collection and disposal system. Additionally, we see a growing trend towards the use of private sector services by public entities for collection, waste hauling and disposal programs. Local governments continue to play a significant role in collections and recycling. We also see a trend towards facility corrective action, whether it is related to landfill gas or groundwater impacts. This demonstrates the maturity of an industry that is not only improving current collection and disposal efficiencies, but is correcting the ramifications of past management practices.

Thank you to all who participated and helped make this survey a success. Should you have any questions, comments or suggestions for future surveys, please don't hesitate to contact us.

Anticipated Solid Waste Activities

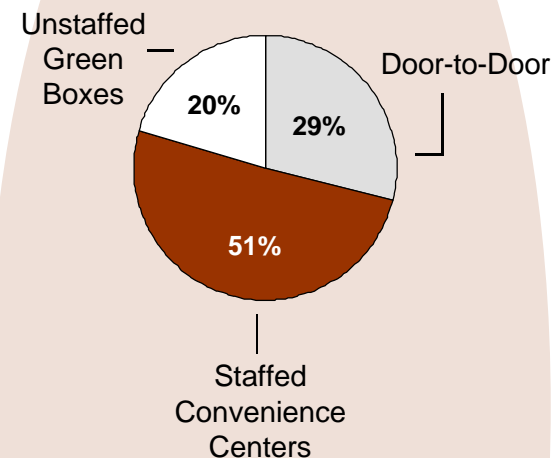


In answering the anticipated solid waste activities question, the majority of survey participants who responded and who operate landfills plan to expand. A combined 85% indicated facility expansion, new cell construction or new site permitting is anticipated within the next two years.

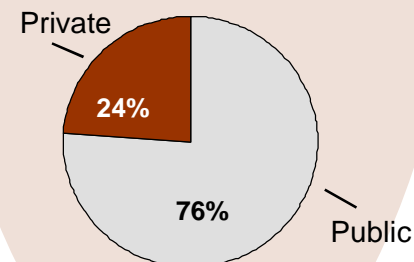
Over 20% of our respondents will perform some level of assessment and corrective action for groundwater or landfill gas impacts, and nearly 1 in 4 are anticipating the capture and beneficial use of landfill gas in the future.

Collection System

Type of Collection



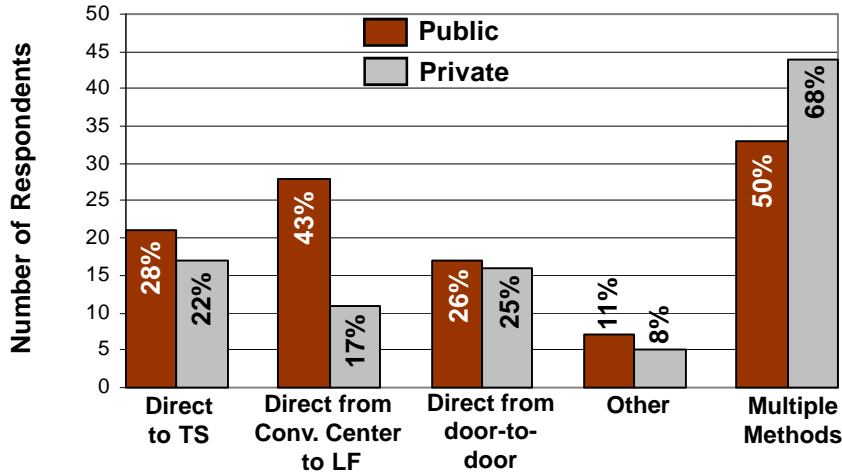
Operation



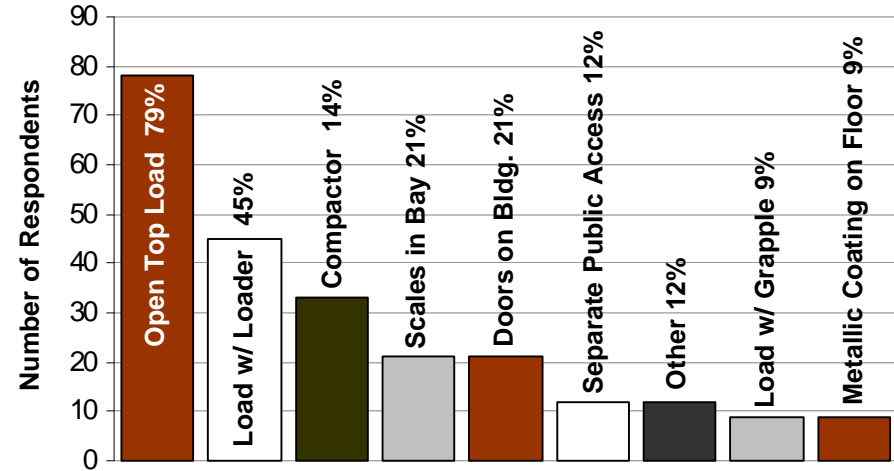
Waste Transportation

Percentages in these bar graphs are based on total number of responses.

Method of Transfer Used - Waste Only



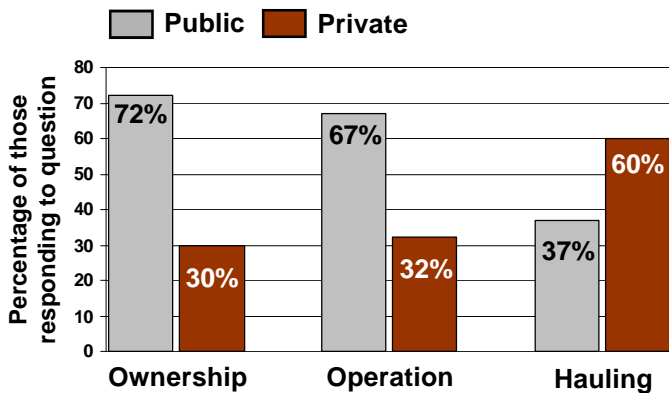
Primary Components of Transfer Stations



Our survey results indicate that when waste is collected from rural convenience centers, local government most often provides the service. Where door-to-door collection is provided, the service is nearly equally split between the public and private sectors. However, a large portion of the local governments responding rely on more than one method of waste collection, meaning that convenience centers, door-to-door and greenbox sites are used depending on rural or urban collection.

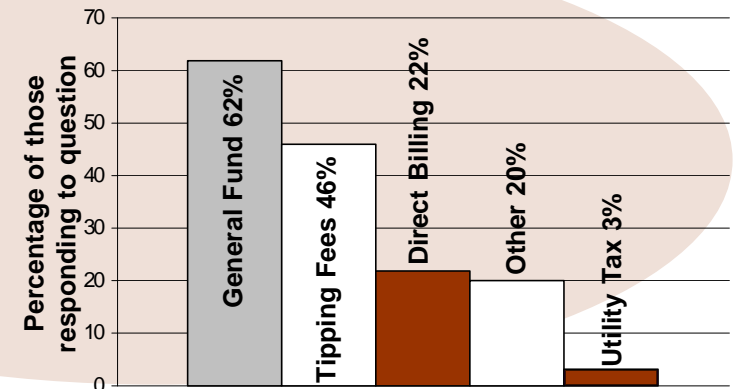
Most local governments own and operate their solid waste transfer stations, but rely upon the private sector for providing the manpower and equipment to haul waste to the disposal facility. Open topped trailers are the method of transfer used most often, significantly outpacing the use of compactor systems. Although tipping floor wear is a common issue at transfer stations, only a small fraction use metallic coating to improve durability.

Transfer Station Activities



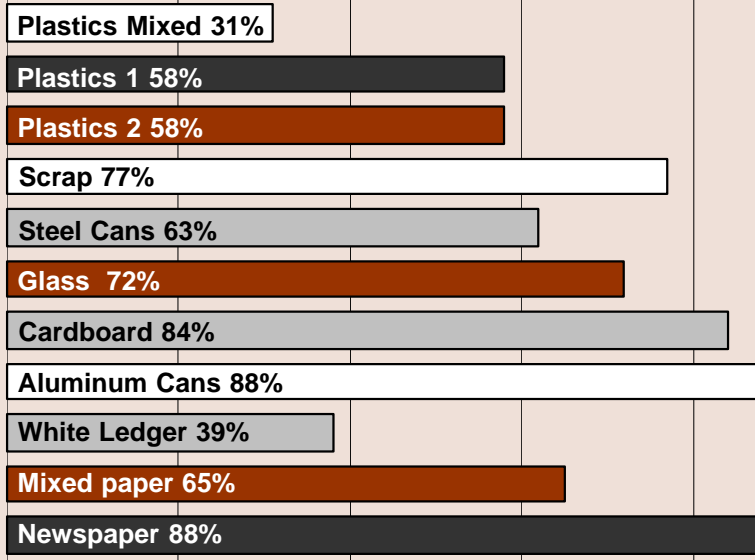
Fifty-four percent (54%) of our respondents utilize more than one method of funding. Of those that utilize tipping fees, utility taxes or direct billing to fund their programs, 62% supplement those sources of revenue via the general fund. Some methods used to fund programs, other than those listed in the chart to the right, include property tax, beer tax, sales tax, and charges assessed to out-of-county waste.

Transfer and Disposal Funding



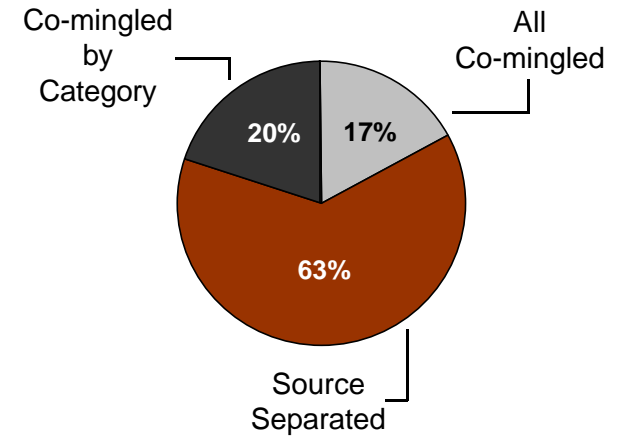
Recycling Activities

Recycled Materials



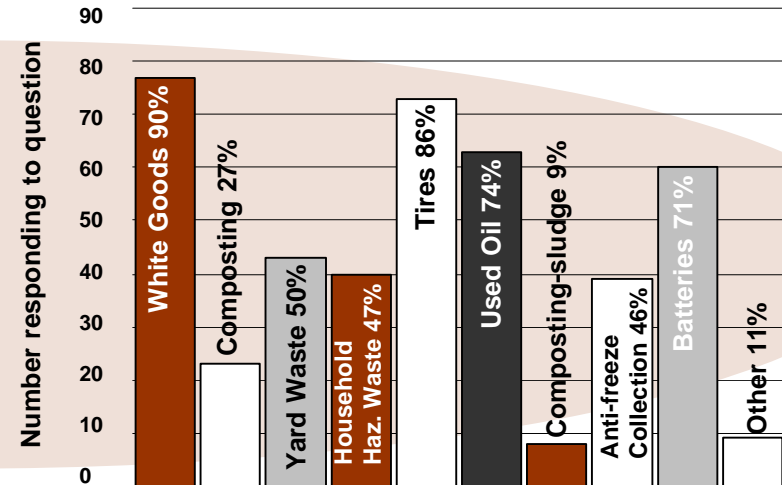
Percentage based on total number of responses

Collection of Recyclable Materials



Special Recycling Programs

Most basic recycling programs collect and process newsprint and aluminum cans, whereas more comprehensive programs add materials such as cardboard and glass. Recycling programs frequently use some sort of processing, as few programs rely totally on source separation. White goods, tires, used oil, and batteries are special material recycling programs we see being implemented.



Percentage based on total number of responses

The information in this report was provided by respondents to a survey and is presumed to be correct. In some cases, the respondents were contacted by telephone and interviewed to clarify responses. However, Draper Aden Associates does not warrant the accuracy of the information presented in the report.

Solid Waste Data

Locality	Tonnage Received in 2002	Type of Facility	Residential Cost/Ton	Commercial Cost/Ton	Industrial Cost/Ton	Landfill Funding*	Current Financial Assurance Burden
Virginia							
Accomack County	22,443	MSW Landfill #3	\$41.00	\$41.00	\$41.00	TF	Local Govt. financial test
Accomack County	18,410	MSW Landfill #2	\$41.00	\$41.00	\$41.00	TF	Local Govt. financial test
Amherst County	27,286	MSW Landfill	\$53.00	\$44.00	\$44.00	GF, TF	
Bedford County	41,482	MSW Landfill	\$61.00	\$38.00	\$38.00	TF	Operating/Capital Invest. Funds
Botetourt County	25,461	MSW/CDD/IND Landfill	\$23.50	\$23.50	\$41.00	GF	
City of Bristol	2,018	MRF	\$47.00	\$47.00	\$47.00	TF	Govt. Financial Test
City of Bristol	3,973	Pit Burner	\$26.50	\$26.50	\$26.50	TF, DB	Govt. Financial Test
City of Bristol	169,236	MSW Landfill #588	\$26.50	\$26.00	\$26.50		Govt. Financial Test
City of Bristol	1,852	Veg. Waste Landfill	\$21.60	\$21.60	\$21.60		Govt. Financial Test
City of Bristol	2,506	MSW Landfill #498	\$26.50	\$26.50	\$26.50		Govt. Financial Test
City of Martinsville	86,020	MSW/CDD Landfill	\$31.70	\$31.70	\$31.70	TF	Alternative II, Financial Ratio Test
City of Waynesboro	2,573	MSW Landfill				DB, UT	
Culpeper County	41,594	Transfer Station	\$39.00	\$39.00	\$39.00	TF, UT	Financial Test
Dinwiddie County	19,281	Transfer Station	\$28.00			GF, TF	Demonstration
Fauquier County	62,740	MSW Landfill	\$30.00	\$38.00		O	County Finance
Fauquier County	131,717	CDD Landfill		\$25.00		O	County Finance
Gloucester County ¹	544,082	MSW Landfill	\$45.00			TF	Performance Bond
Greensville County	31,500	MSW Landfill	\$35.00	\$35.00	\$35.00	TF	
Loudoun County	1,840	CDD Landfill	\$55.00	\$55.00	\$55.00	GF, TF	
Loudoun County	15,155	MSW Landfill	\$55.00	\$55.00	\$55.00	GF, TF	Financial Test
Nottoway County	22,034	MSW Landfill		\$27.00	\$27.00	TF, UT	County Govt.
Pittsylvania County	42,119	MSW Landfill	\$38.00	\$38.00	\$38.00	GF, TF	Local Govt. Financial Test
Prince Edward County	29,412	MSW Landfill	\$30.00	\$30.00	\$30.00	GF, TF	Local Govt. Test
Prince William County ²	286,743	MSW Landfill	\$0.00	\$0.00	\$0.00	O	Local Govt. Financial Test
Rappahannock County	6,700	MSW Landfill	\$43.00	\$43.00	\$43.00	GF, TF	
Rockbridge County	45,000	MSW Landfill		\$41.25	\$41.25	GF	Govt. Financial Test
Rockingham County (<i>Harrisonburg Waste</i>)		MSW Landfill	\$50.00	\$50.00	\$50.00		
Rockingham County (<i>County Waste</i>)	108,500 ³	MSW Landfill	\$29.00	\$29.00	\$29.00		
Tazewell County	62,000	MSW Landfill		\$30.00	\$30.00	GF, TF	
Wise County		Tires Landfill	\$40.00	\$40.00	\$40.00		
Wise County		CDD Landfill	\$30.00	\$30.00	\$30.00	TF, DB, O	
Wise County	52,110	MSW Landfill	\$35.00	\$35.00	\$35.00	TF, DB, O	

*Funding: Tipping Fee(TF), General Fund(GF), Utility Tax(UT), Direct Bill(DB), Other(O)

¹ Utilizes the Middle Peninsula Waste Management Facility; their waste is generally disposed of at no cost.

² Prince William County bills users a solid waste fee based on tonnage generated.

³ Total tonnage for city and county.

Solid Waste Data

Locality	Tonnage Received in 2002	Type of Facility	Residential Cost/Ton	Commercial Cost/Ton	Industrial Cost/Ton	Landfill Funding*	Current Financial Assurance Burden
North Carolina							
Cherokee County	19,200	MSW Landfill	\$36.00	\$36.00	\$36.00	GF, TF, O	15A NCAC 13B
Fort Bragg	146,000	Industrial Landfill				O	US Army
Fort Bragg	110,000	CDD Landfill				O	US Army
Gaston County	83,965	MSW Landfill Cell 2	\$27.50	\$27.50	\$27.50		Local Govt. Financial Test
Gaston County	37,351	CDD Cell C Landfill	\$22.00	\$22.00	\$22.00		Local Govt. Financial Test
Granville County	34,000	CDD Landfill				TF	
Miller C&D Recycling	10,000	CDD Landfill		\$28.00	\$28.00	TF	
New Hanover County	117,637	MSW/CDD/IND Landfill	\$46.00	\$46.00	\$46.00	TF	Local Govt. Financial Test
Orange County	27,710	CDD Landfill	\$41.00	\$41.00		TF	
Orange County	56,577	MSW Landfill	\$45.00	\$45.00	\$45.00		Local Govt. Financial Test
Richmond County	41,121	Transfer Station		\$40.00	\$40.00	UT	
Rockingham County	82,000	MSW Landfill	\$38.00	\$38.00	\$38.00	TF	Self-Insured Enterprise Fund
Rockingham County		Clean wood/inert debris	\$19.00	\$19.00	\$19.00		
Rowan County	70,000	MSW Landfill	\$28.00	\$28.00	\$28.00	TF	Local Govt. Financial Test
Scotland County	27,680	CDD Landfill	\$31.00	\$31.00	\$31.00	TF	
Wayne County	113,000	MSW Landfill	\$23.00	\$23.00	\$23.00	TF	
Tennessee							
BAE SYSTEMS Ordnance Systems Inc.	6	IND, Subtitle D				O	Operating Expense, Company Funds
Bi-County SW Mgt. System	30,000	CDD Landfill					Post Reserve Fund
Bi-County SW Mgt. System	145,303	MSW Landfill					Post Reserve Fund
Henry County	10,609	CDD Landfill	\$25.00	\$25.00	\$25.00	GF, TF	Property Tax
Loudoun County	45,320	MSW Landfill	\$34.13	\$34.13	\$24.00	TF	Contract in lieu of Bond
McMinn County	9,500	CDD Landfill				TF	
McMinn County	32,000	MSW Landfill	\$22.00	\$22.00			
Pickett County	540	MSW Landfill	\$3.00	\$25.75	\$25.75	TF, O	Property Tax, Sales Tax, Tipping Fees
Sevier Solid Waste, Inc.	48,000	MSW Landfill	\$40.10	\$40.10	\$40.10		Tipping Fee
Sevier Solid Waste, Inc.	83,000	Composting Facility	\$40.10	\$40.10	\$40.10		Tipping Fee
Sevier Solid Waste, Inc.	16,000	CDD Landfill	\$37.20	\$37.20	\$37.20	GF, TF	Tipping Fee
Town of Greeneville	5,770	CDD Landfill	\$16.00	\$16.00	\$16.00		Contract in lieu of Performance Bond
Town of Greeneville	45,667	Transfer Station	\$38.47	\$38.47	\$38.47	GF, TF	Contract in lieu of Performance Bond
White County		CDD Landfill	\$35.00	\$35.00		TF, UT	
White County	18,000	MSW Landfill	\$35.00	\$35.00		TF, UT	

*Funding: Tipping Fee(TF), General Fund(GF), Utility Tax(UT), Direct Bill(DB), Other(O)

Miscellaneous Statistics

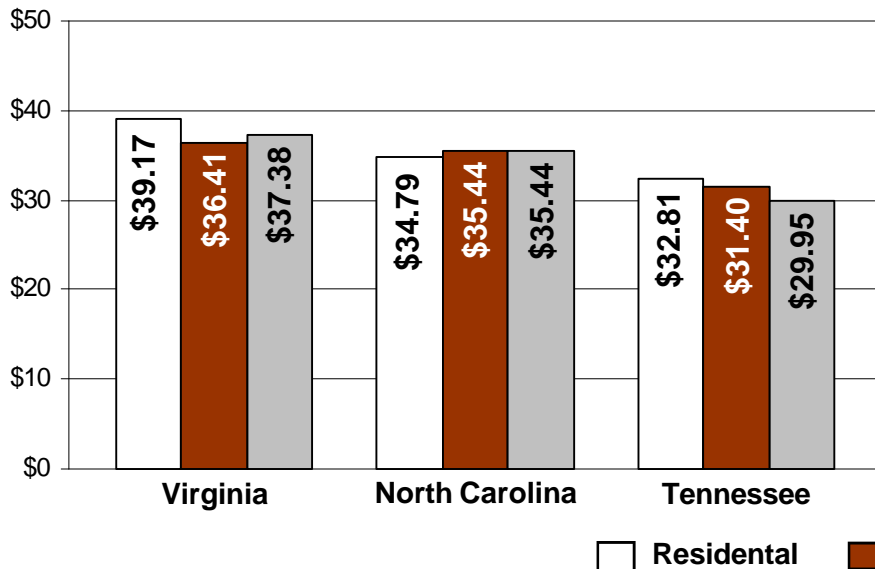
Waste Disposal Capacity			
Disposal Capacity	VA	NC	TN
MSW			
Annual Disposal Rate ¹ (tons)	12,793,548	8,808,147	7,723,508
Total Disposal Capacity (tons)	251,810,045	NR	101,240,504 ²
Years of Disposal Capacity	19.7	NR	13.1
CDD			
Annual Disposal Rate (tons)	2,652,354	2,104,582	
Total Disposal Capacity (tons)	20,423,122	NR	
Years of Disposal Capacity	7.7	NR	

1 Includes imported waste 2 Calculated

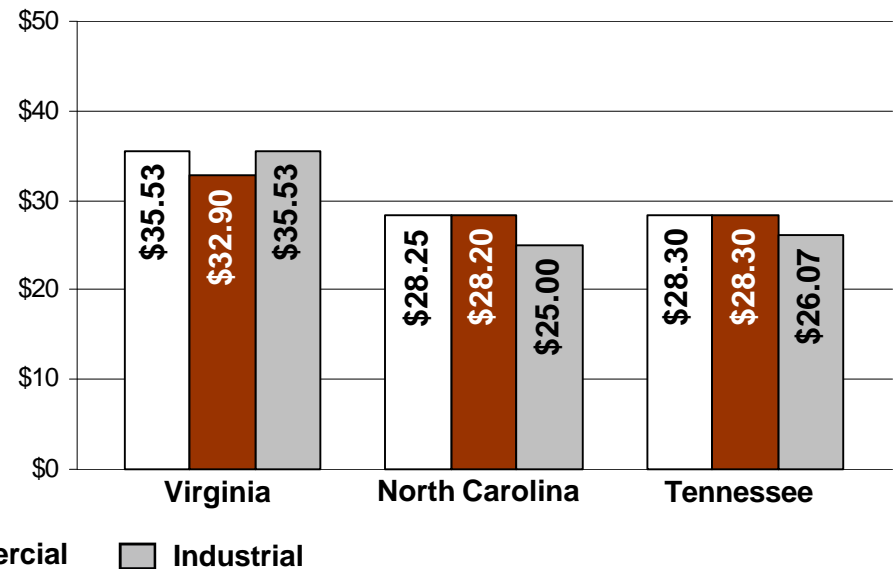
This year, we compared some additional solid waste statistics representing the three-state area surveyed. Agencies in each state compile information of their own. Virginia information was obtained from "Solid Waste Managed in Virginia During Calendar Year 2002", by the Commonwealth of Virginia Department of Environmental Quality, June 2003. Tennessee information was obtained from unpublished information provided by the Tennessee Department of Environment and Conservation, June 2003, and North Carolina information was obtained from its "Solid Waste Management Annual Report", dated July 1, 2001 – June 30, 2002.

The average cost for disposal across the region ranges from \$29.95 to \$39.17 per ton for municipal waste disposal and from \$25 to \$35.53 for CDD disposal. The averages per state, for residential, commercial and industrial, are shown in the charts below:

MSW Cost Per Ton



CDD Cost Per Ton





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