

Wake County Waste Management Data



Wake County Sustainability Task Force Meeting

Thursday, March 18, 2010

4:00 - 6:00 pm

Wake County Commons Building,
Wake County Office Park, 4011 Carya Dr.



Solid Waste Abbreviations and Acronyms

C&D	Construction and demolition
CII	Commercial, institutional, and industrial
LCID	Land clearing and inert debris
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
NWLF	North Wake Landfill (Closed MSW Facility)
OCC	Old corrugated cardboard
OMG	Old magazines
ONP	Old Newspapers
OP	Office paper
PB	Plastic Bottles
SWLF	South Wake Landfill (Active MSW Facility)
WTE	Waste to Energy



Overview of Existing Solid Waste System in Wake County

■ Landfills

- One (1) publicly owned municipal solid waste (MSW) landfill, privately operated
 - *Permit allows Wake County-only trash*
 - *25-year estimated life (2008 to 2033)*
- Seven (7) privately owned and operated C&D landfills

■ Transfer Stations

- Two (2) publicly owned, privately operated, municipal solid waste transfer stations
- Three (3) privately owned and operated municipal solid waste transfer stations



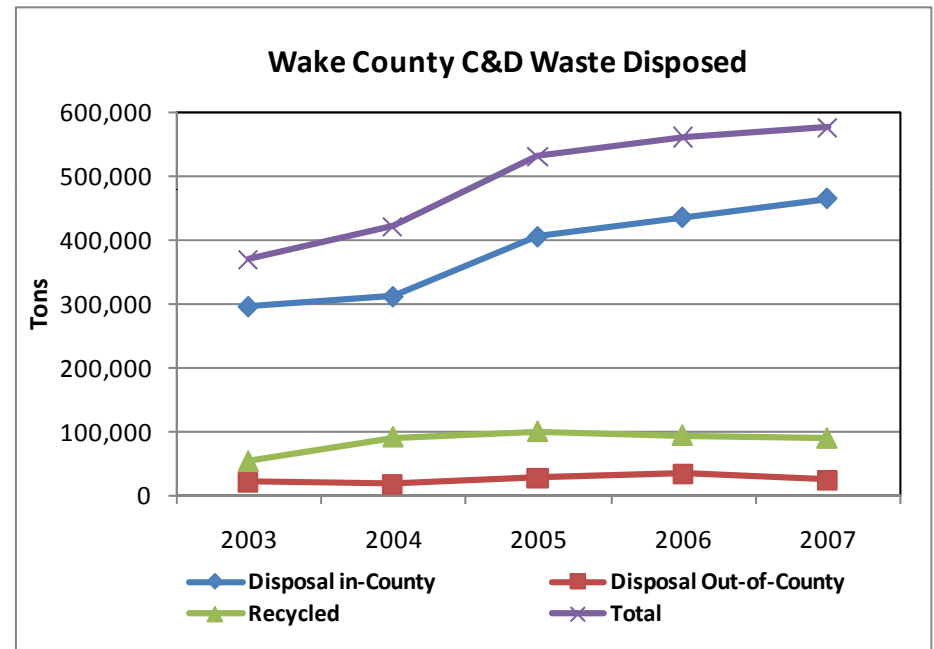
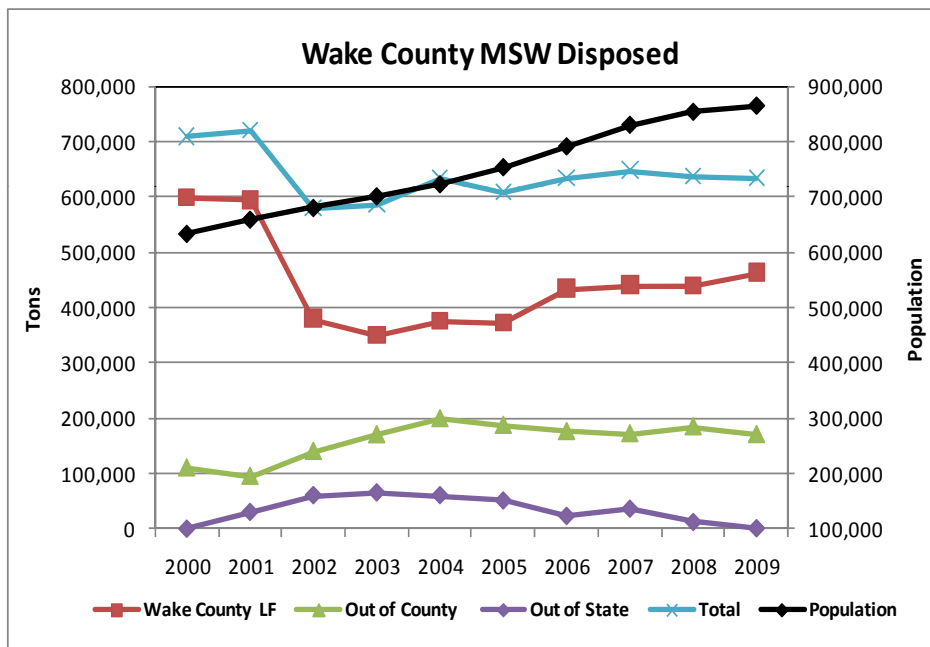
Overview of Existing Solid Waste System in Wake County

- Recycling Processors
 - Two (2) privately owned and operated recyclable material processors (paper, plastic, glass, cardboard, metal)
- Solid Waste Collection
 - Three (3) publicly owned solid waste collection systems (Cary, Fuquay-Varina, and Raleigh) for residential waste
 - Multiple private solid waste collection companies
 - *Service provided for other municipalities (competitive bids)*
 - *Service for commercial, industrial, institutional (non-single family residential) – subscription or negotiated service*



Solid Waste in Wake County

Where does it all go – MSW and C&D?



Source: North Carolina Solid Waste Management Annual Reports.

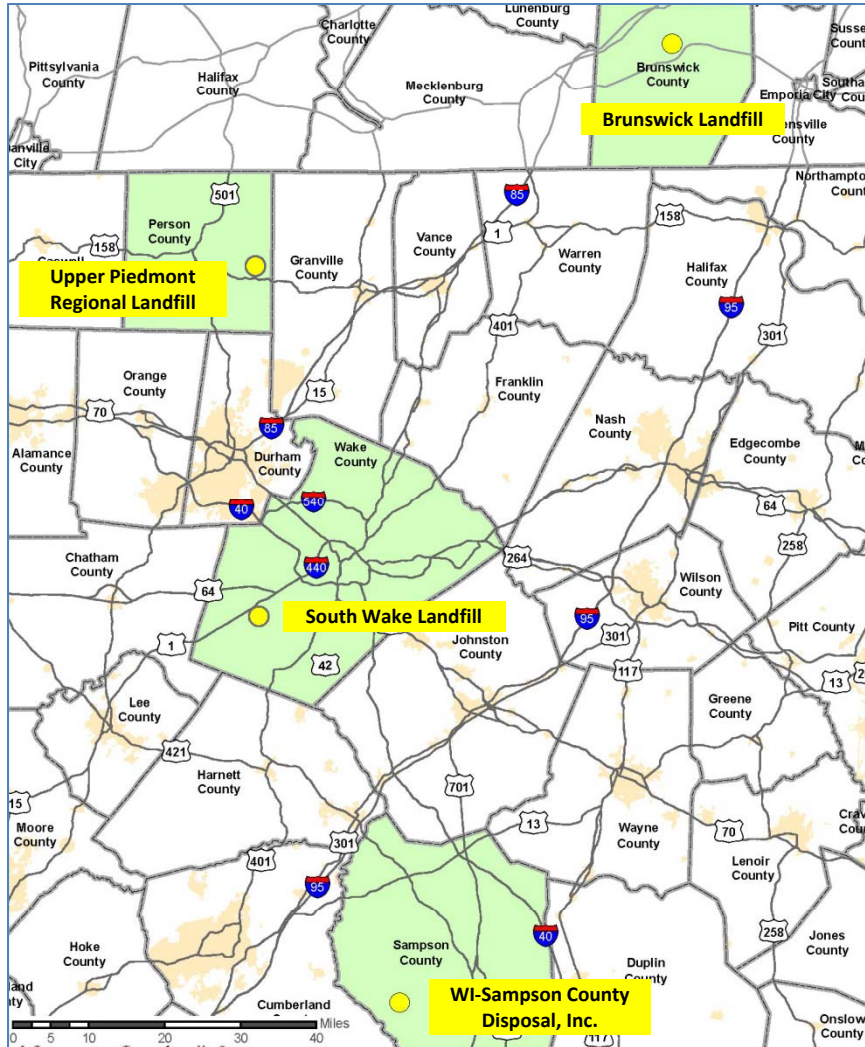
Source: Gershman, Brickner & Bratton, Inc., Final Report – 2008, Wake County North Carolina, C&D Waste Assessment - Strategic Review of Quantities Generated, Processing and Disposal Capacities, and Recycling Market Attributes.

Comparable 2008 and 2009 data not available for C&D waste



Solid Waste in Wake County

Where does all the MSW go?



FY 2009 Destinations of Wake County Generated MSW*

MSW Landfill	Tons MSW	Percent
South Wake Landfill	463,126	73%
WI-Sampson County Disposal, Inc.	166,688	26%
Upper Piedmont Reg Landfill (Person Co.)	2,430	< 1%
BFI-Charlotte Mtr Speedway Landfill	853	< 1%
Brunswick Landfill, VA	695	< 1%
Palmetto Landfill, SC	234	< 1%
Uwharrie Env. Reg. Landfill	55	< 1%
New Hanover Waste-To-Energy Facility	26	< 1%
Rowan County Landfill	9	< 1%
Total	634,116	

* C&D waste not included



Recycling

Where does it all go – Raleigh?

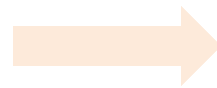
Clear Glass
Brown Glass
Green Glass
PETE #1
HDPE #2
Plastic Beverage Rings
Aluminum Cans
Aluminum Foil and Trays
Steel Cans
Newsprint
Cardboard
Magazines and Catalogs
Office Paper
Gable Top Cartons
Paperboard, Chipboard, Paper Tubes
Aseptic Drink Boxes

Electronics
White Goods

Yard Waste

Ink Jet and Toner Cartridges
Cell Phones

City of Raleigh Recycling Destinations



111 South Rogers Lane
Raleigh



North Wake Multi-Material Recycling Facility



City of Raleigh Yard Waste Recycling Facility



Quality Cartridges



Recycling

Where does it all go – Cary?

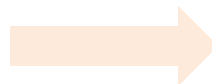
Town of Cary Recycling Destinations

Commingled Recyclables (Curbside)

Mixed Plastic (Drop-Off)

Cardboard (Drop-Off)

Magazines (Drop-Off)



1815 Capital Boulevard
Raleigh

Used Oil



Noble Oil

Cooking Oil



Triangle Biofuels

Yard Waste



McGill Environmental and Novozymes

Electronics



American Greenz

White Goods

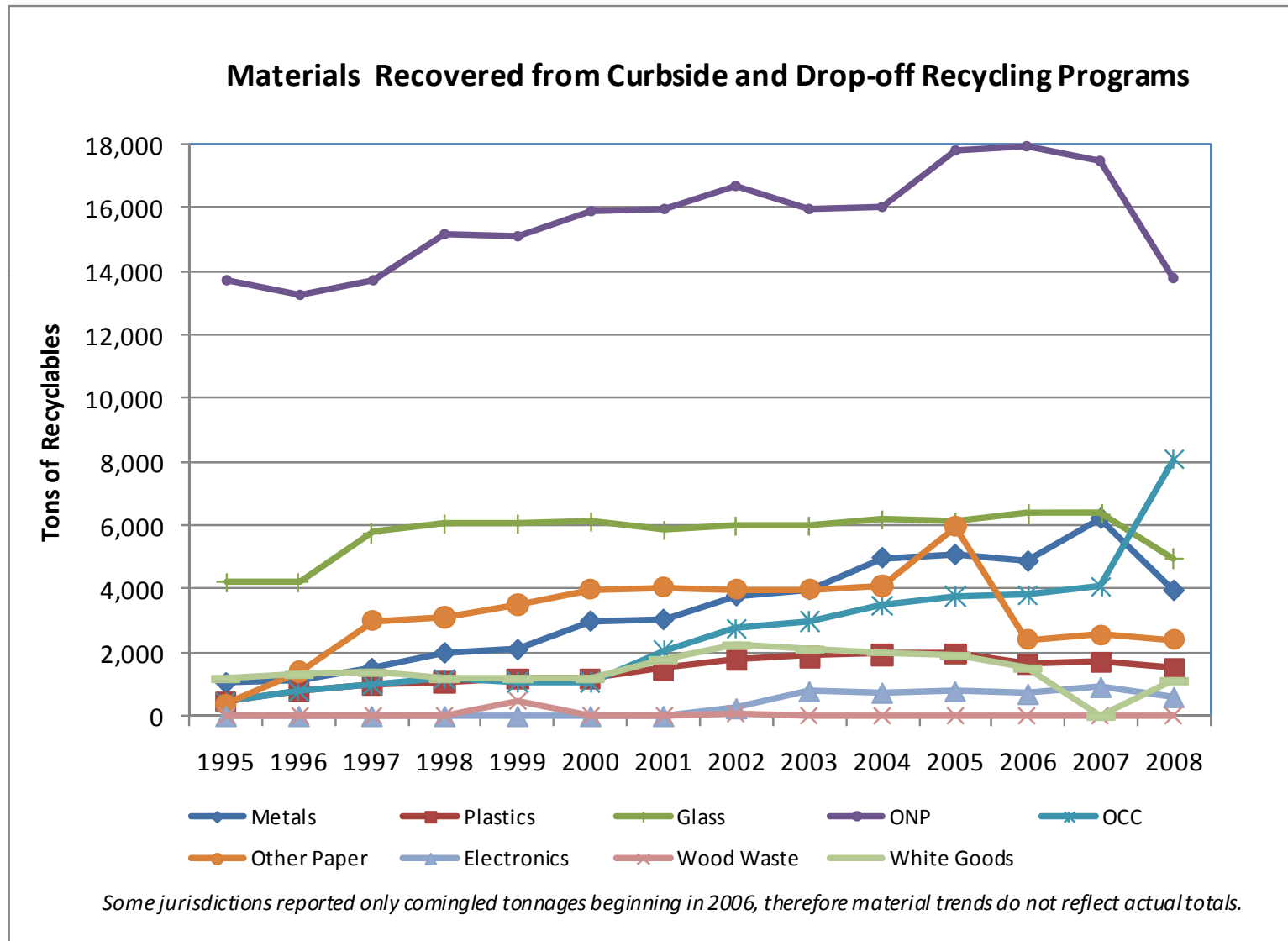


South Wake Multi-Material Recycling Facility



Recycling

How much do we recycle?





Sustainability Task Force

Board of Commissioner Expectations

1. Develop recommendations that are environmentally and financially sustainable
2. Develop performance measures by which the County, and the community as a whole, can measure progress toward the achievement of sustainability targets



Performance Metrics

Waste Generation - statewide

Rate of Per Capita Waste Disposal Changes – North Carolina

Fiscal Year	Tons of waste disposed	NC population	Tons of waste per person per year	Per capita waste change from Base Year 91-92	Per capita waste increase or decrease from previous year
2008-2009	9,910,031	9,227,016	1.07	0.0% ↑	-13.7% ↓
2007-2008	11,284,712	9,069,398	1.24	15.9% ↑	-7.5% ↓
2006-2007	11,837,104	8,860,341	1.34	25.2% ↑	-1.5% ↓
2005-2006	11,765,183	8,682,066	1.36	27.1% ↑	5.4% ↑
2004-2005	11,029,485	8,541,263	1.29	20.6% ↑	1.6% ↑
2003-2004	10,713,444	8,418,090	1.27	18.7% ↑	3.3% ↑
2002-2003	10,236,960	8,323,375	1.23	15.0% ↑	0.8% ↑
2001-2002	9,999,284	8,188,008	1.22	14.0% ↑	0.8% ↑
2000-2001	9,752,510	8,049,313	1.21	13.1% ↑	-6.2% ↓
1999-2000	10,267,137	7,938,062	1.29	20.6% ↑	9.3% ↑
1998-1999	9,214,323	7,797,501	1.18	10.3% ↑	4.4% ↑
1997-1998	8,607,578	7,645,512	1.13	5.6% ↑	-3.4% ↓
1996-1997	8,741,727	7,490,812	1.17	9.3% ↑	11.4% ↑
1995-1996	7,722,795	7,336,228	1.05	-1.9% ↓	-0.9% ↓
1994-1995	7,624,144	7,180,525	1.06	-0.9% ↓	6.0% ↑
1993-1994	7,038,505	7,036,927	1	-6.5% ↓	0.0% ↓
1992-1993	6,890,818	6,892,673	1	-6.5% ↓	-6.5% ↓
Baseline year 1991-1992	7,257,428	6,781,321	1.07		
1990-1991	7,161,455	6,632,448	1.08		

↑ Designates an increase in waste per person

↓ Designates a decrease in waste per person

Source: North Carolina Solid Waste Management Annual Report FY2008-2009



Performance Metrics

Waste Generation - locally

Wake County Waste Disposal and Waste Reduction Rates

$$\frac{\text{Total Wake County Tons Disposed}}{\text{Population}} = \text{Tons per Person per Year}$$

FY	MSW Tons Disposed¹	Wake Co. Population	Waste Disposal Rate (tons/person)	Percent Change from Baseline²
04-05	914,252 /	746,336	= 1.23	-12.5%
05-06	1,071,973 /	755,034	= 1.42	+1.4%
06-07	1,140,479 /	790,007	= 1.44	+2.9%
07-08	1,151,050 /	832,590	= 1.38	-1.5%
08-09	976,762 /	864,429	= 1.13	-19.3%

¹ Includes C&D waste tons

² Wake County baseline (FY 1988-1989) rate was 1.40 tons per person per year



Performance Metrics

Waste Generation - locally

Waste Generation Index: Tons per Single Family Residential (SFR) Unit

Fiscal Year	Single Family Residential Units	Total Waste (MSW + C&D), tons	Ratio: Total Waste/SFR Units	MSW Waste Only	Ratio: MSW/SRF Units	C&D Waste Only	Ratio: C&D Waste/SFR Units
99-00	186,604	1,003,432	5.4	719,363	3.9	284,069	1.5
00-01	195,846	915,467	4.7	714,548	3.6	200,919	1.0
01-02	204,969	917,239	4.5	567,885	2.8	349,354	1.7
02-03	213,489	911,280	4.3	585,130	2.7	326,150	1.5
03-04	222,122	956,879	4.3	620,088	2.8	336,791	1.5
04-05	231,020	1,035,959	4.5	609,100	2.6	426,859	1.8
05-06	241,796	1,095,391	4.5	632,986	2.6	462,405	1.9
06-07	253,939	1,139,733	4.5	648,170	2.6	491,563	1.9
07-08	264,073	1,138,874	4.3	636,250	2.4	502,624	1.9
08-09	266,658	966,702	3.6	634,116	2.4	332,586	1.2
		Average:	4.5	Average:	2.8	Average:	1.6

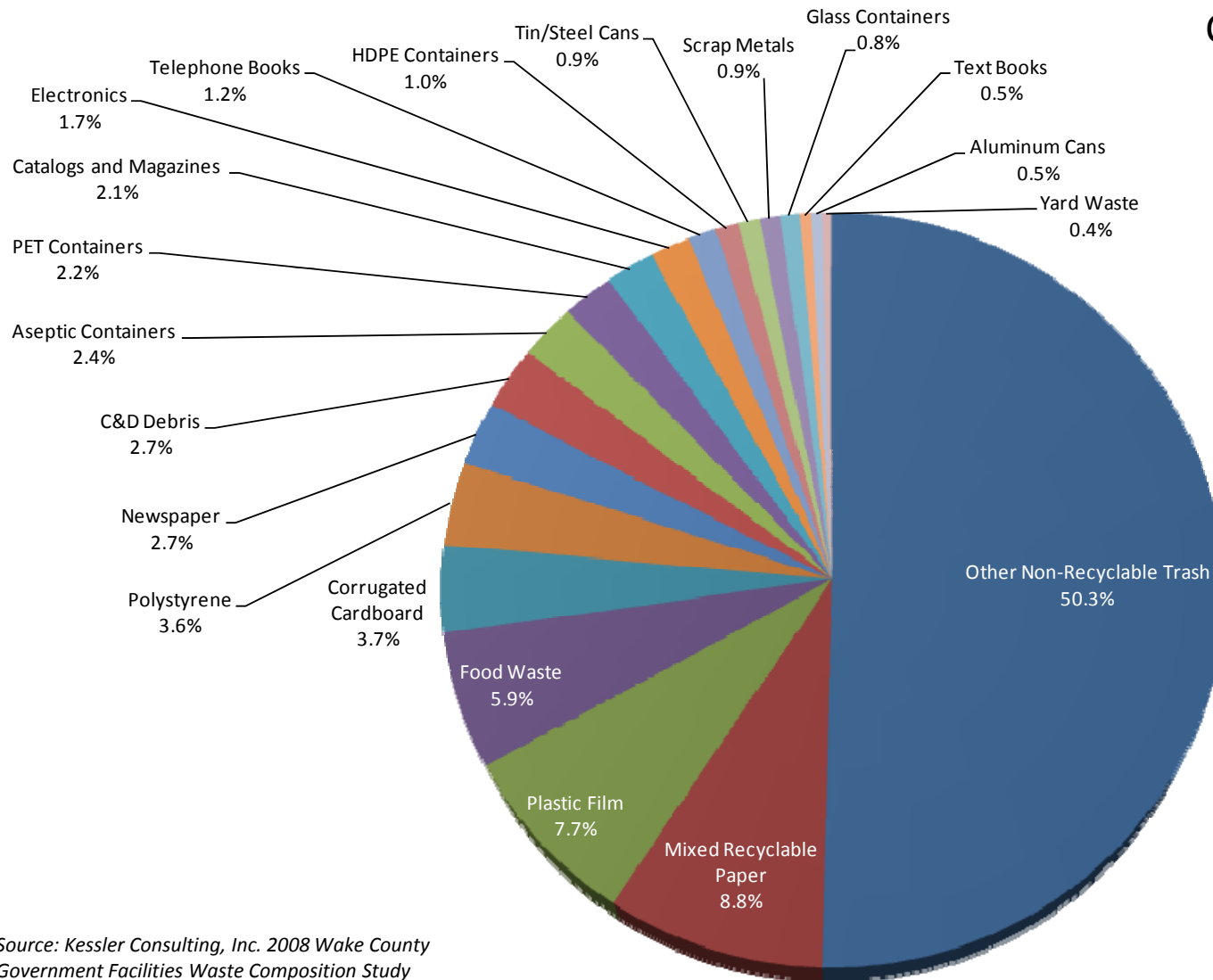


Performance Metrics

Waste Characteristics – Wake County

Composition of Waste Disposed by Wake County Government Facilities 2008

(% by weight)

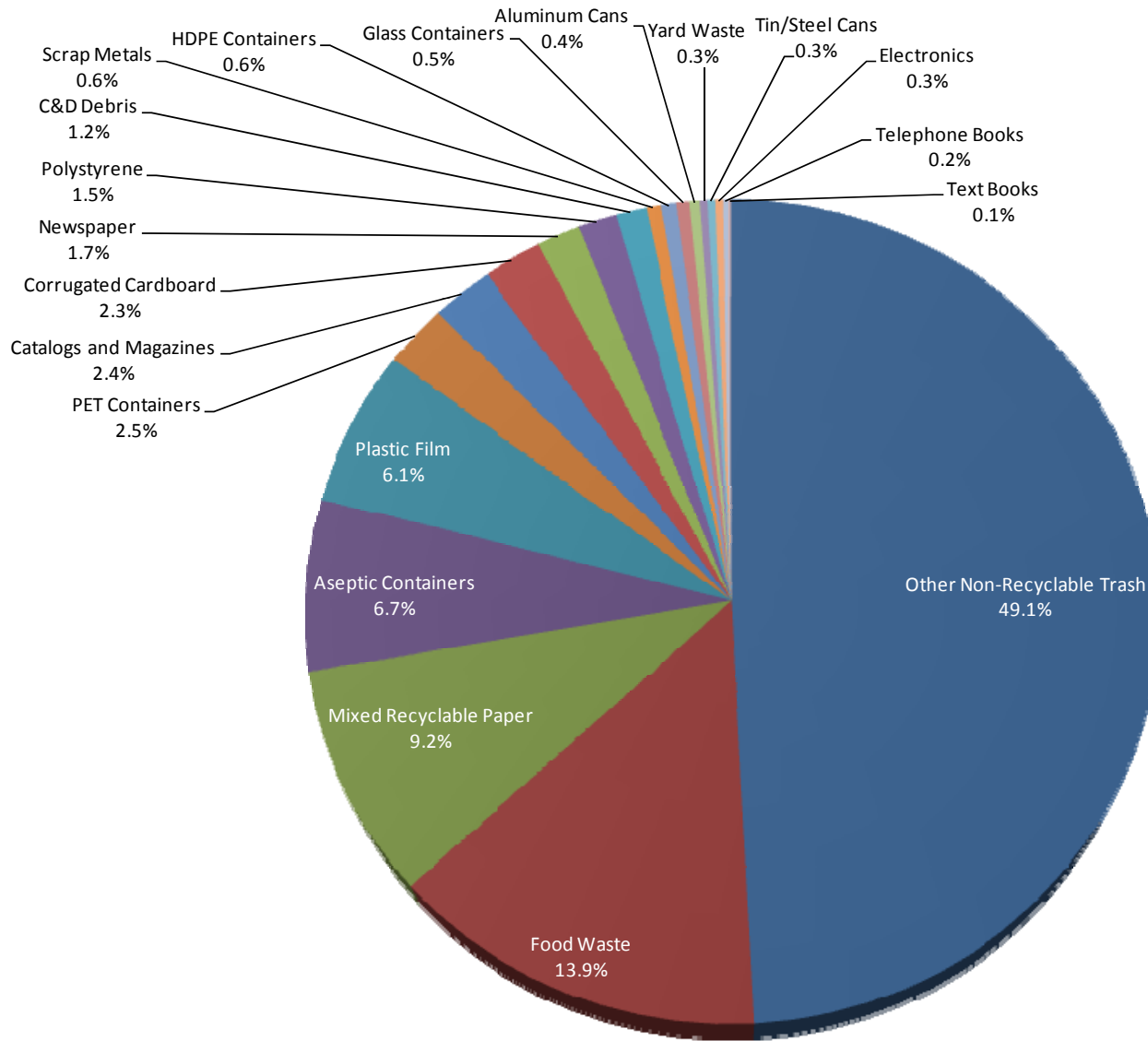


Source: Kessler Consulting, Inc. 2008 Wake County Government Facilities Waste Composition Study



Performance Metrics

Waste Characteristics – Public Schools



Composition of
Waste Disposed by
Wake County
Public Schools

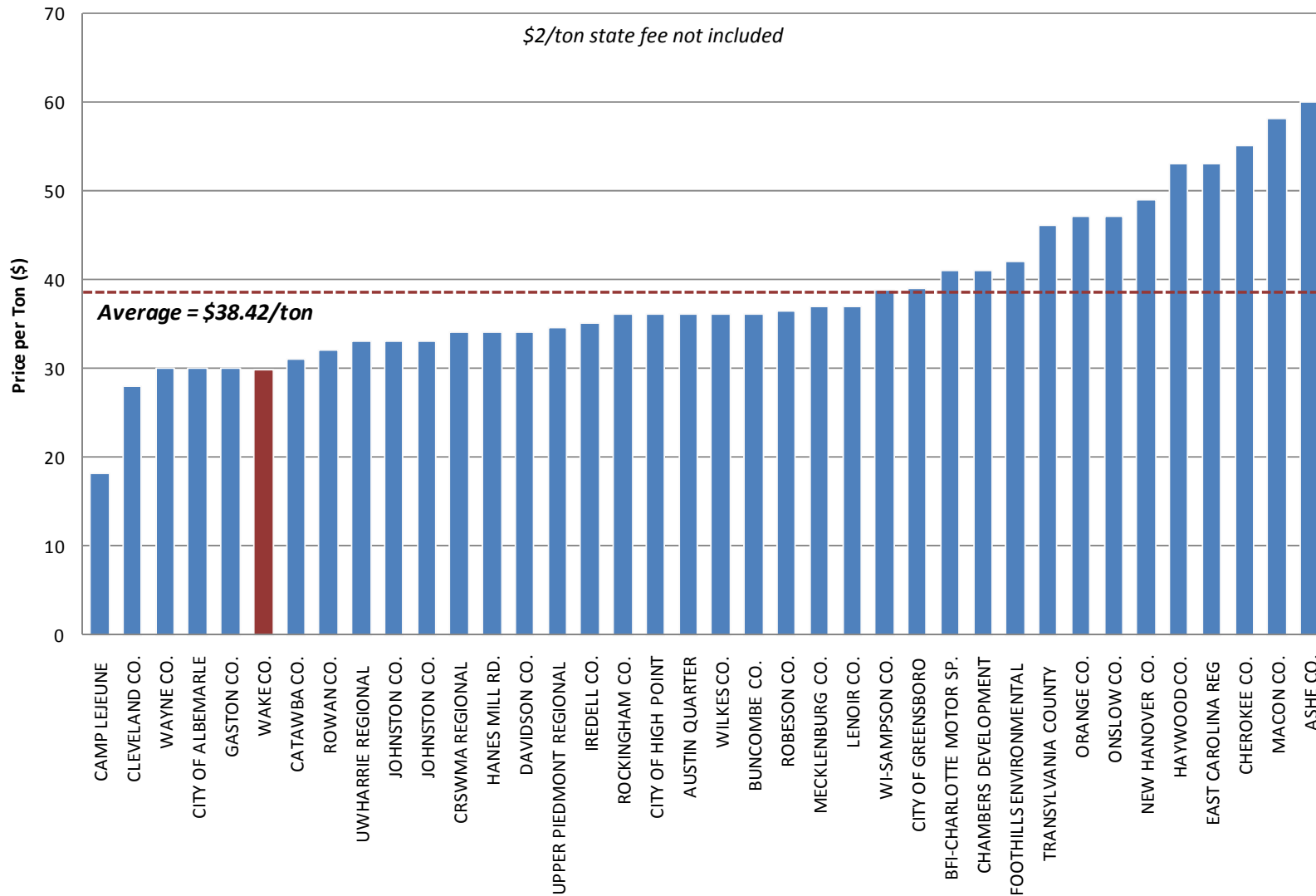
(% by weight)



Performance Metrics

Cost of Service - disposal

North Carolina MSW Landfill Tipping Fees at End of FY 2009 (\$/ton)





Performance Metrics

Cost of Service – collection and disposal

Comparison of Solid Waste Contracted Services Costs - Wake County Local Governments

Municipality	Monthly Charge per Residence:					Service Provider
	Weekly Garbage Collection	Weekly Recycling Collection	Bi-Weekly Recycling Collection	Weekly Yard Waste Collection	Bi-Weekly Yard Waste Collection	
Apex	\$9.13	\$2.16	-	<i>Self Perform</i>	-	Waste Industries
Garner	\$8.01	-	\$1.90	\$4.62	-	All-Star Waste
Holly Springs	\$8.15	\$3.25	-	<i>Self Perform</i>	-	Waste Industries
Knightdale	\$9.95	\$3.54	-	<i>Self Perform</i>	-	Waste Industries
Morrisville	\$10.11	\$4.80	-	-	\$1.29	Waste Industries
Rolesville	\$8.66	\$3.27	-	<i>Wake Forest</i>	-	Waste Industries
Wake Forest	\$9.97	\$3.25	-	<i>Self Perform</i>	-	Republic
Wendell	\$8.63	\$2.26	-	-	<i>Self Perform</i>	Waste Industries
Zebulon	\$9.29	\$3.54	-	<i>Self Perform</i>	-	Waste Industries
Cary	-	-	-	-	-	<i>All Self Performed</i>
Fuquay-Varina	-	-	-	-	-	<i>All Self Performed</i>
Raleigh	-	-	-	-	-	<i>All Self Performed</i>
Average:	\$9.10	\$3.26				
Low:	\$8.01	\$2.16				
High:	\$10.11	\$4.80				

Source: 2009 Wake County Solid Waste Management Plan

QUESTIONS

