

Response to Task Force Requests



Wake County Sustainability Task Force Meeting

Thursday, April 15, 2010

4:00 - 6:00 pm

City of Raleigh Wetlands Center



What is Wake County Government's Practice for Purchasing Recycled-Content Paper?

- **Wake County's Office Supply Products Vendor is Office Depot**
 - FY 2009, Wake County spent \$82,462 on paper
 - 22% (\$17,970) of Wake County's paper purchases contained at least 10% recycled content
 - 78% (\$64,492) of Wake County's paper purchases contained 0% recycled content (responsible forestry)
- **Paper Prices (recycled-content paper costs more)**
 - 0% recycled content = \$35.31 per case
 - 30% recycled content = \$35.93 per case
 - 100% recycled content = \$47.21 per case



Recycling Approaches/Case Studies

- **Mandatory**
 - Seattle, WA; Pittsburgh, PA; Durham, NC
- **Pay-As-You-Throw**
 - Sacramento, CA; Fort Worth, TX; Minneapolis, MN
- **Existing Approach (Voluntary)**
 - Cary, Fuquay-Varina, Raleigh



Mandatory Recycling Case Study

City of Durham, NC

- 1997 Ordinance
 - Unlawful to place targeted recyclables in garbage
 - Applies to residential, commercial and industrial
- Compliance Plan
 - Financial penalties assessed for non-compliance
- FY 2008-2009 Performance
 - Tons of solid waste ~49,300
 - Tons of recycling ~ 12,300
 - Diversion rate ~20%



What is Pay-As-You-Throw?

- **Pay-As-You-Throw (PAYT)**
 - Also known as variable rate or unit-based pricing
 - Customers charged proportional to level of service received (i.e. quantity of trash collected and disposed)
 - Similar to pricing approaches for electricity and water service
- **Concept**
 - Use service pricing as a means to create an economic incentive for citizens to reduce the quantity of materials they dispose because waste disposal costs increase with increased waste disposal quantities



What is Pay-As-You-Throw?

- **Intended Outcome**
 - Individuals will voluntarily reduce, reuse, and recycle to reduce monthly waste disposal bill (achieve more recycling and diversion)
- **Approaches**
 - Variable can sizes: large, standard, mini- and micro
 - Bag program: purchase individual bags to accommodate individual needs (i.e. more bags = more cost)
 - Sticker program: similar to bag program, but affix sticker to standard size bags requiring disposal (more bags requires more stickers = more cost)
 - Weight-based program (garbage-by-the-pound): use truck-based scales to weigh individual containers and charges based on per-pound basis.

Fort Worth, TX

- PAYT implemented April 2003
- Estimated population: ~700,000 persons
- All customers receive 64-gallon recycling cart
- Garbage cart price options – includes recycle pickup
 - 32 gallon garbage cart = \$12.75 per month
 - 64 gallon garbage cart = \$17.75 per month
 - 96 gallon garbage cart = \$22.75 per month
 - Excess waste bags: \$15 for 5 bags
- Waste diversion increased from 6% to 21% with PAYT





Existing Approach - Voluntary

- Recycling is offered to all single-family residential units
- Single-family residential units are not required to accept the recycling bin or to use recycling bin.
- Regardless of whether a single-family resident chooses to accept the bin, not accept the bin, use the bin, or not use the bin, the single-family residential unit is still charged the recycling fee.



Existing Approach - Voluntary

- **Cost of Service (*avg weekly residential, corporate limits*)**
 - Trash disposal ~\$2.40 per month
 - Trash collection and hauling ~\$6.70/month
 - Recycling collection and hauling ~\$3.34/month
- **Cost of Service (*avg weekly residential, unincorporated area*)**
 - Trash disposal ~\$2.40 per month
 - Trash collection and hauling ~\$25.00/month
 - Recycling collection and hauling ~\$4.00/month
- **System Performance**
 - Diversion rate range ~14% to 27%
 - Cumulative diversion rate ~20.3%



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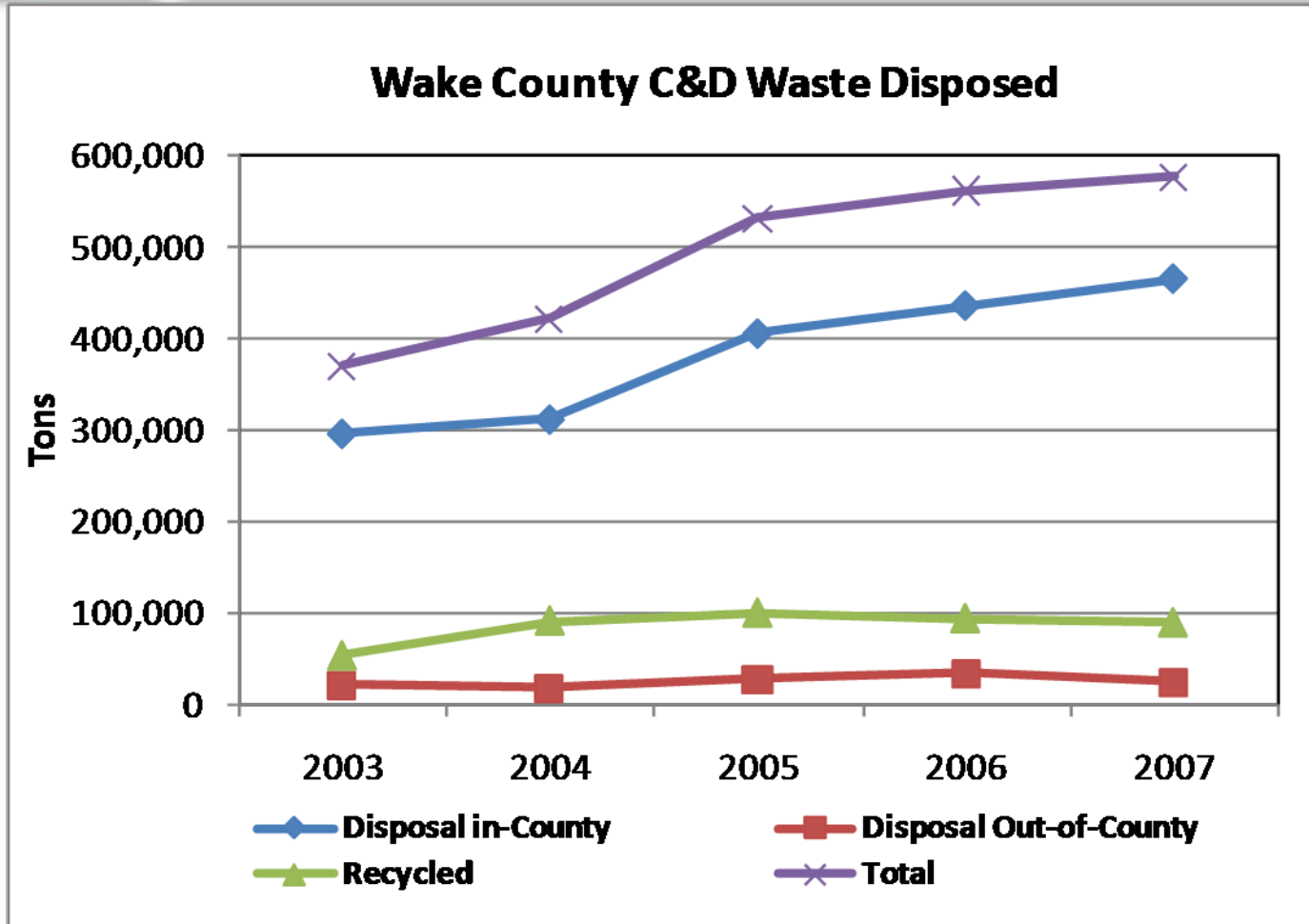


Primary C&D Materials

- **Typical C&D Materials Requiring Disposal**
 - Concrete/Masonry
 - Scrap Lumber
 - Asphalt Shingles
 - Gypsum Drywall
 - Carpet and Carpet Padding
 - **C&D Tipping Fees in Wake County**
 - Disposal (\$/ton): \$26.10 to \$42.50
 - Recycle (\$/ton): \$31.50 to \$42.50
- All privately owned and operated facilities*



Historical C&D Disposal Rates



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



Forecasted C&D Disposal Capacity

- **Current C&D Generation Rate, tons per year**
 - ~580,000 tons
- **Current C&D Recycling Rate, tons per year**
 - ~90,000 tons (~15.5%)
- **Current C&D Disposal Rate, tons per year**
 - ~490,000 tons (~84.5%)
- **Estimated C&D Disposal Capacity, In-County Facilities**
 - 32.2 million tons
- **Estimated C&D Landfill Life, In-County Facilities, years**
 - ~ 68 years if 100% of capacity dedicated to Wake County
 - ~ 51 years if 75% of capacity dedicated to Wake County
 - ~ 60 years of C&D Recycling increased to 30%, and 75% of capacity dedicated to Wake County



C&D Recycling Options

- **Concrete/Masonry**
 - Crushed and sieved: non-structural backfill (driveways, site fill, erosion control)
- **Scrap Lumber**
 - Clean, non-treated: boiler fuel and mulch
- **Asphalt Shingles**
 - Asphalt paving, pothole repair
- **Gypsum Drywall**
 - Soil amendment (lime supplement)
- **Carpet and Carpet Padding**
 - More research required



C&D Recycling – Next Steps

- **Conduct additional case-study research**
- **Meet with the Homebuilders Association**
- **Meet with C&D Recyclers/Landfill Operators**