

July 19, 2007

Carts Innovate Recycling Collection

- High Collection Productivity-Single Stream
- No Blowing or Wet Paper
- Increase diversion since overflow from small bins no longer goes into the Garbage
- Allow collection of additional materials
- Ease of use increases participation
- Larger Carts allow less frequent collection (Bi-Weekly or even Monthly)
- Virtually eliminate Workers Comp Injuries



Consumer Considerations

- Container is large enough to hold all recyclables
- Container is easy to Tilt and Roll when loaded
- Container's appearance at the home
- Fits the available storage space
- Container Durability
- Perceived value of the containers as part of the program and the fees the user pays
- Appearance of the City/County streets on set out day





Recycling Collector Considerations

- Correct Container Size(s) 20, 32, 48, 64 or 96 gallons
- Compatibility with current and future collection equipment
- Program image is tied to the container's appearance
- User educational markings increase diversion and reduce contamination
- User satisfaction the container is the user's connection to the program
- Cost to assemble, store and deliver containers
- Lifecycle cost = Purchase Price + Maintenance Parts &





User Educational Markings



LID HOT STAMP



ADHESIVE LABEL



MOLDED-IN LID GRAPHIC





Cart Lifecycle Cost

- Purchase prices vary by a few dollars
- Failure rate drives maintenance cost
 - 10 Year warranty covers parts
 - Cost of non-warranty parts
 - Estimated labor cost per service call is \$15+
- Replacement Cost do the carts selected last 10 years or 15 to 20 years?
- Political Costs Poor cart durability reflects negatively on the program due to high number of complaints

Replacement Cost/Lifespan

- Proven Field Durability of Rotationally Molded Toter
 Carts:
 - Washington, D.C. "Supercans" 1982 to 2001
 - Arlington County, VA easily 1980's to Present
 - High Point, NC 1980 to Present
 - Columbia, SC 1980 to Present
 - Pasadena, CA 1987 to Present
- Historical failure rate of 0.2% per year (2 carts per





Not All Carts are Commodities

- Commodity "A mass produced, unspecialized product."
- Injection Molded Carts Same Injection Molding Process, part designs, and same HDPE material
- Advanced Rotationally Molded Toters
 - Stress Free Rotational Molding
 - High Strength MDPE
 - Attractive, functional "Granite" colors
 - Patented "Rugged Rim™"



Not All Carts are Commodities

- Advanced Rotationally Molded Toters
 - Molded-In, Leakproof stop bar bearings
 - Nestable when Fully Assembled to save Delivery Cost
 - Ergonomic axle placement for easiest tilting/rolling
 - Innovative 48 gallon cart





Material Performance Advantage:

Environmental
Stress Crack Resistance
(ESCR)

Elongation at Yield

Medium Density*

LL-8400

Rotational Molding

High Density* HD-6605

Injection Molding

500 Hours

Joo i louid

17 Hours

765%

19%

Source: Exxon Mobil

*Density Difference is 0.9%





Washington, D.C.

- Single Stream Semi-Automated Collection
- Municipal Service
- 32 Gallon Carts
- Weekly Service
- Replaced Contracted Service with

Manual Bins

- Rolled out 110,000 Carts in 2005
- Average Diversion Rate is 18%







Wake Forest, NC

- Single Stream Fully Automated Collection
- Private Contractor-Republic
- 48 Gallon Carts
- Weekly Service
- Rolled out 7500 carts in 2005
- Participation up from 50% to 97%
- Diversion Rate has doubled







Newport News, VA

- Single Stream Fully Automated Collection
- Private Contractor-Tidewater Fibers
- 64 Gallon Carts with 110° Lids
- Bi-Weekly Set Out
- Rolled Out 40,000 Carts in 2003







Metro Nashville

- Single Stream Fully Automated
 Collection
- Municipal Service
- 96 Gallon Carts
- Service once every 4 weeks
- Voluntary Participation
- Rolled out 112,000 carts in 2002
- Contracted Maintenance Repairs
 Average 228 Carts per year = 0.2%







THANK YOU!

TO OUR MANY LONG TIME CUSTOMERS WHO ARE MEMBERS OF THE COUNCIL OF GOVERNMENTS

WASHINGTON, D.C.

COLLEGE PARK

ROCKVILLE

MONTGOMERY COUNTY

FREDERICK

ALEXANDRIA

ARLINGTON COUNTY

FAIRFAX COUNTY



