

City of Martinsville Recycling Program

2010 Solid Waste Disposal Quantities

- The City serves approximately 6,000 residential customers and approximately 135 commercial customers.
- Total amount of waste delivered to the Transfer Station during 2010 was 8,106 tons. Tipping fees totaled \$436,398.
- Residential waste accounted for 62% of the waste stream at 5,013 tons. Tipping fees totaled \$268,176.00
- Commercial waste accounted for 38% of the waste stream at 3,093 tons. Tipping fees totaled \$168,222.00

CURRENT RECYCLING PROGRAM

- Drop-off collection center on Market Street
 - Roll-off boxes for plastic #1 & #2, cardboard, newsprint, mixed paper, aluminum, metal
- Bulk trash collection program recycles metal appliances and white goods.
- Office and mixed paper is collected from City offices.
- Metal cans are collected from the Jail and school cafeterias.
- Wood waste collected by the City is ground by a contractor and used as boiler fuel.



Continued:

- Old asphalt milled during paving is recycled into new asphalt.
- Surplus or waste materials used at the City Shop are recycled.
- Christmas trees are collected and ground into mulch used by Gateway Streetscape.
- Listed quantities do not include materials recycled by commercial business, industries, or private individuals.

2010 Recycling Quantities:

ITEM	QUANTITY RECYCLED/REUSED
• Plastics	• 25.69 Tons
• Paper/Newspaper	• 87.46 Tons
• Cardboard*	• 15.84 Tons
• Aluminum	• 1.92 Tons
• Other Metals	• 48.64 Tons
• Ground Wood Waste	• 623.75 Tons
• Asphalt	• 610.00 Tons
• Auto Batteries	• 21 Each
• Waste Oil	• 1,600 Gals.
• Solvents	• 40 Gals.
• Parts Cleaning Fluids	• 200 Gals.
• Truck Tires Recapped	• 87 Each

*Started Collecting September 2010

MAJOR FACTORS AFFECTING COST OF RECYCLING

- Variations in market prices paid for recycled materials.
- Hauling cost to transport materials to buyer facilities.
- Long haul distances due to lack of local buyers.
- Capital cost for equipment and facilities to start a recycling program.
- Operating expenses to collect, process, and market recycled materials.

POTENTIAL OPTIONS FOR RECYCLING:

Option I

Continue with the current program.

Advantages

- No capital expenditures
- Minimal operating expense
- Could expand the program to include an additional collection site for approximately \$20,000.00



Disadvantages

- Not as convenient for citizens as curbside collection program.
- Income from selling the recyclables is minimal.
- Does not increase the percentage of materials removed from the waste stream.
- Lack of available collection sites.

Option II

Continue with the drop off collection site(s). Construct a basic handling facility and purchase a baler to maximize income from materials and reduce hauling cost. Use inmate labor with a Supervisor to process and bale the material when delivered from the collection site(s). Capital cost for baler with associated equipment and facilities would be approximately \$80,000.00

Advantages

- Clean, baled material brings higher price from buyers.
- Optimizes weight hauled per trip to buyer. It cost essentially the same to haul 15 tons as it does to haul one ton.
- Considerably less capital cost and operating expense as compared to a curbside collection program and associated processing facilities.
- No additional manpower would be needed to process the material. Would use existing supervision to oversee inmate labor.
- Can be expanded later to accommodate a curbside program.

Disadvantages

- Not as convenient for citizens as a curbside collection program.
- Does not increase the percentage of materials removed from the waste stream.



Option III

Institute a curbside recycling program. This option would provide curbside recycling to all residential customers throughout the City on a weekly basis.



Advantages

- Provides citizens the convenience of placing their household recyclables at the curb in front of their residence.
- Increases the percentage of materials removed from the waste stream.
- Optimizes weights hauled per trip to buyers.

Disadvantages

- Requires additional staffing and a large initial capital expenditure for collection vehicles, processing facilities, materials handling equipment, etc.
- Typical initial capital cost for a program the size of Martinsville's program would range from a minimum of \$500,000.00 to \$1.50 million.
- An increase in residential collection rates typically range from \$1.50 to \$3.00 per month per customer. The rate increase is required to cover the operating expense and debt service for this type program.

THINGS TO CONSIDER

- Curbside recycling is convenient and generates increased quantities of recyclables, but requires a large initial outlay of funds. (\$500,000 to \$1.5 million)
- Curbside recycling typically requires a rate increase to cover operating cost for the program. (\$1.50 to \$3.00)
- The City already meets the required recycling rates mandated by Virginia.
- Is the convenience and increased quantities generated by a curbside program worth the initial capital cost?
- Are citizens willing to pay higher rates to have the convenience of a curbside collection program?
- Voluntary or required participation ? Incentives?

Recommendations

- Due to the extremely high capital cost and operating expense of a curbside recycling program, this option is not recommended at this time. This option may be feasible in the future if adequate capital funding can be obtained to start the program and if there is sufficient citizen interest in a curbside program to justify a nominal refuse collection rate increase to operate/maintain the program.

Recommendations, cont.

- Provide funding to expand the current drop off collection program. The additional funding will be used to purchase a baler and construct an enclosed baling facility. Baling the recycled materials will optimize the prices received for the materials and will decrease the cost of hauling larger quantities to markets. The cost of this expansion will be approximately \$80,000.00.

Recommendations, cont.

- Continue public education and awareness of the importance of recycling and better publicize the existing drop-off recycling operation.
- Utilize public service announcements on MGTV and the City's web page.
- Work with the school system to promote recycling with students and faculty.
- Work with community/citizen groups interested in recycling.