Solid Waste Management in Georgia

The Road to Recycling
Major Trends

- Increase in Disposal Rate
- Increase in Disposal Capacity
- Reduction in Recycling Programs
- Increase in Out-of-State Waste Imports
- Shift from Public to Private Sector Services
The amount of available permitted landfill capacity (not necessarily constructed capacity) grew steadily from 1994 through 2004. The amount of remaining permitted capacity in “SL” facilities, the old unlined landfills, declined over the past decade. In 1993 there were over 70 unlined landfills in the state, in 2004, only 5 facilities remain. For the most part these facilities receive very small volumes of waste on an annual basis and therefore are expected to last well into the future. The City of Macon’s Walker Road landfill is an exception; it receives approximately 350 tons per day of MSW and is expected to close in 2017.

The amount of Construction & Demolition (C&D) permitted landfill capacity has grown significantly over the past decade; with permitted capacity doubling from 15 million cubic yards in 1996 to 30 million cubic yards in 2001. Capacity has since tripled to nearly 90 million cubic yards as of July 2004.

The state has approximately 26.6 years of permitted MSW disposal capacity and 19.9 years of permitted C&D disposal capacity, based upon the disposal rates reported in 2004. It is important to note that this capacity is for permitted airspace, not necessarily active landfill space. As can be seen in the next slides the amount of permitted disposal capacity available within any given region in the state can vary greatly and the available permitted capacity has become increasingly concentrated in fewer, more regional facilities over the past decade.
In 2004 there were 57 municipal solid waste (MSW) landfills accepting waste for disposal in Georgia; 41 were owned by the public sector and 16 were privately owned. Of the 11.7 million tons of MSW disposed in 2004, only 3 million tons were disposed at the 41 facilities owned by the public sector, while almost nine million tons were disposed at the 16 privately owned MSW landfills in the state.

Construction and Demolition (C&D) disposal rates followed a very similar pattern, 625,000 tons of C&D waste disposed at the 37 C&D landfills owned by the public sector and over nearly three million tons of C&D waste disposed at the 16 privately owned C&D landfills in the state.
Average Landfill Tipping Fees: July, 2006

2004 Fee Survey
The weighted State Average MSW Fee $34.95, up from $32.85 in 2003
The weighted State Average C&D Fee: $28.14, up from $28.15 in 2003

The regional average tipping fee in the Northeastern part of the nation is far higher, with an average tipping fee of $55 per ton, with the state of New Hampshire reporting an average of more than $76 per ton.

Please note that the tipping fees reported for Georgia are the posted gate rate fees, actual tipping fees vary greatly depending upon the volume of waste delivered to a facility and are often times significantly less than the posted gate rates.

For a complete listing of the average tipping fees in the state by RDC, consult the Annual Solid Waste Report on-line at www.dca.state.ga.us.
Out-of-State MSW Imports

Georgia Recycling Programs

Source: DCA Annual Solid Waste Management Surveys

- Aluminum
- Glass
- PET
- HDPE
- Steel Cans
- Newspaper
- Corrugated
Georgia's Disposal Rate of Recyclables in Tons

<table>
<thead>
<tr>
<th>Recyclable Type</th>
<th>Total in Tons</th>
<th>Market Value</th>
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</thead>
<tbody>
<tr>
<td>Corrugated Cardboard</td>
<td>733,866</td>
<td>$84 million</td>
</tr>
<tr>
<td>Mixed Paper (other recyclable)</td>
<td>427,910</td>
<td>$43 million</td>
</tr>
<tr>
<td>Newspapers</td>
<td>227,001</td>
<td></td>
</tr>
<tr>
<td>Glass</td>
<td>244,564</td>
<td></td>
</tr>
<tr>
<td>Office Paper</td>
<td>225,580</td>
<td></td>
</tr>
<tr>
<td>Magazines</td>
<td>176,437</td>
<td></td>
</tr>
<tr>
<td>Other Ferrous</td>
<td>175,449</td>
<td></td>
</tr>
<tr>
<td>Steel Cans</td>
<td>89,680</td>
<td>$89 million</td>
</tr>
<tr>
<td>#1 PET</td>
<td>89,577</td>
<td>$89 million</td>
</tr>
<tr>
<td>#2 HDPE</td>
<td>73,460</td>
<td>$89 million</td>
</tr>
<tr>
<td>Aluminum Cans</td>
<td>40,140</td>
<td>$89 million</td>
</tr>
</tbody>
</table>

Total of 2.6 million tons

Approximate Market Values

Georgians annually throw away an estimate 2.6 million tons of common, every day recyclables, with an estimated market value of over $300 million.

Georgians throw away:

1.9 million tons of paper a year
- 320,000 tons of newsprint, -- market value of $43 million
- 730,000 tons of Cardboard -- $84 million
- 225,000 tons of Office Paper -- $50 million

1.0 million tons of plastic
- 90,000 tons of Plastic Beverage Containers -- $30 million
- 500,000 tons of Film Plastic

360,000 tons of metal
- 48,000 tons of aluminum cans -- $89 million
- 240,000 tons of glass

If we recycled just 1.7 million tons of the aluminum, paper, glass, and plastic thrown away annually in Georgia, we would:

- Conserve 4% of the total energy consumed annually within the state or the equivalent of the transportation energy consumed by over 1,000,000 Georgians each year; and
- Conserve over 7 million barrels of oil calculated at an annual savings of almost $700 million.

The energy and commodity values alone represent over a billion dollars a year in potential market value in Georgia.
Recycling

What does it mean to Georgia?
Recycling is good for the environment and good for Georgia’s economy

Paper mills use 40% less energy to make paper from recycled paper than they do making paper from virgin timber. (Dept of Energy)

A ton of paper made from recycled fibers conserves 7,000 gallons of water (DOE)

Georgia has strong markets for recyclables

What gets recycled here has the potential to be used in manufacturing new products here in the state

Strong markets for Paper, Plastic, Metal, and Glass

Many manufacturing facilities using recycled materials are forced to import materials from across N. America
Georgia’s Paper Industry

- 10 Pulp & Paper Companies Headquartered
- 9 of the 16 Mills using recycled fiber rely exclusively on recycled materials for their operations
- $10 billion annual shipments of paper products
- 25,000 Employees - Annual payroll $1 billion
- Georgia Mills consumed over 2.7 million tons of recovered paper in 2003, over 7.7% of total US consumption
Georgia’s Plastic Industry

- Almost 2% of Georgia’s Workforce with 74,810 Employees with an annual payroll of approx. $940 million
- $8.7 billion in annual sales
- 1/3rd of all PET Beverage Containers recycled in N. America are recycled in Georgia
- 54 of the 495 plastic manufacturers use recycled plastic in their operations
Aluminum & Glass

- Novelis - Aluminum Recycler in Greensboro, Georgia
- Glass
  - Strategic Recycling, supplying glass to 3 Manufacturers using recycled glass in the State

Aluminum Recycling
- Novelis, an aluminum recycler located in Greensboro GA import cans from across N. America

The State has strong markets for Glass Recycling
- 2 Manufacturers in the state using recycled glass
Barriers to Increased Waste Diversion

- Competition with low tipping fees

- Lack of:
  - Civic Will/Understanding
  - Cost-effective/Convenient Collection Infrastructure
  - Regional Processing Capacity
Plan for Action - Partnerships

- Established Waste Disposal Reduction Goals
- Away-from Home Recycling Program
- Regional Recycling Collection Hubs
- Statewide Recycling Marketing Campaign
- Establish Recycling Performance Metrics
Governor’s Response

Go Big . . .

. . . Go Bold

. . . Let’s do it
Building a New Bridge for Recycling
## Commodity Goals Established

### Per Capita MSW Disposal Rate/MSW Reduction Goal

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Actual 2004</th>
<th>Projected 2012</th>
<th>Projected % 2012</th>
<th>Projected 2017</th>
<th>Projected % 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass</td>
<td>0.153</td>
<td>0.140</td>
<td>8%</td>
<td>0.140</td>
<td>8%</td>
</tr>
<tr>
<td>Paper</td>
<td>1.181</td>
<td>1.000</td>
<td>15%</td>
<td>0.850</td>
<td>28%</td>
</tr>
<tr>
<td>Metal</td>
<td>0.228</td>
<td>0.198</td>
<td>13%</td>
<td>0.186</td>
<td>18%</td>
</tr>
<tr>
<td>Plastic</td>
<td>0.663</td>
<td>0.560</td>
<td>16%</td>
<td>0.530</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2.23</strong></td>
<td><strong>1.99</strong></td>
<td><strong>11%</strong></td>
<td><strong>1.71</strong></td>
<td><strong>23%</strong></td>
</tr>
</tbody>
</table>
Away-From-Home Recycling

Complete Turn-key Program – Equipment Grant
Statewide Media Campaign

- **Establish a Recycling Advisory Panel:**
  - Identifying programs/activities to achieve goals;
  - Guide the Development of the Campaign
  - Monitor waste reduction progress and programs.

- **Hire Communications Research Firm**
  - Baseline for recycling attitude, awareness, participation
  - Identify potential target audience(s)
  - Test market messages
  - Post-Campaign Assessment
Statewide Media Campaign
(continued)

- Hire Communications Firm to Develop:
  - Statewide Recycling Brand
  - Recycling Mascot
  - Promotional Materials for a Small Business/School Recycling Partnership Program
  - Single Stream Recycling Awareness Materials
  - Web Site
  - A Statewide Promotions Campaign for the Recycling Brand
  - Elected Officials Recycling Video
Recycling Collection Hubs

Anticipated Benefits

- Serve 24% State’s Population or 19% of the Households
- 185% Increase in Recovered Materials from Grantees
- $514,000 in avoided tip fees
- $370,000 in revenue for Host Communities
- ROI of SWTF is 2.8 yrs
Griffin Hub

- Public/Private Partnership
  - City of Griffin
  - Pratt Industries

- Population Served
  - 12 Counties
  - 190,251 Households
  - 2000 Population of 533,778
  - 2010 Est. Population of 722,379
We need to recycle: Paper, Glass, Metal, and Plastic

In the Chattahoochee Flint and McIntosh Trail RDCs, Georgians annually throw away an estimate 115,000 tons of common, every day recyclables,

70,992 tons of paper (Half the paper in the Macon Hub Area)
- 11,390 tons of newsprint, -- market value of $1.5 million
- 33,683 tons of Cardboard -- $3.9 million
- 10,020 tons of Office Paper -- $2.1 million

50,710 million tons of plastic
- 8,728 tons of Plastic Beverage Containers -- $3.0 million (Almost twice than in the Macon Hub)
- 21,674 tons of Film Plastic

26,227 tons of metal
- 3,261 tons of aluminum cans -- $5.9 million
- 14,437 tons of glass (Over double the Macon Hub)

If we recycled just over 100,000 tons of the aluminum, paper, glass, and plastic thrown away annually in these two RDCs, we would

Conserve over 400,00 million barrels of oil calculated at an annual savings of almost $700 million.
Recycle 4 You!

Individual action does make a difference. Did you know that recycling can save enough energy to offset the energy you consume to light a room, run a computer, and watch TV? It can even offset the water you use in your shower!

Recycling 1 glass bottle will save enough energy to light a 100-watt light bulb for 4 hrs
Recycling 1 aluminum can will run a computer for 3 hours
Recycling 1 soft drink bottle will save enough energy to run a TV for 1 ½ hours; and
Recycling 5 lbs of paper will conserve enough water to “offset” the water used in a typical shower.
Technical Assistance

- Curbside Value Partnership
  - Public Education
  - Model Ordinances/Contracts
  - Best Management Practices

- DCA - State Support
  - Recycling Program Assessment Assistance
  - GEFA Recycling Grant Program
  - Statewide Marketing Campaign
  - Monitoring and Reporting
Questions

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