



# Solid Waste Management in Georgia

The Road to Recycling



# Major Trends

Increase in Disposal Rate

Increase in Disposal Capacity

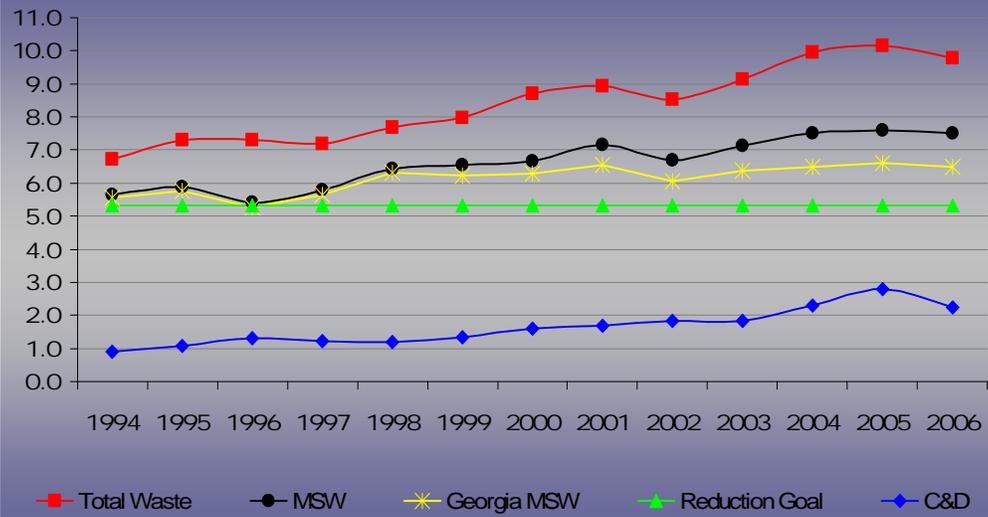
Reduction in Recycling Programs

Increase in Out-of-State Waste Imports

Shift from Public to Private Sector Services

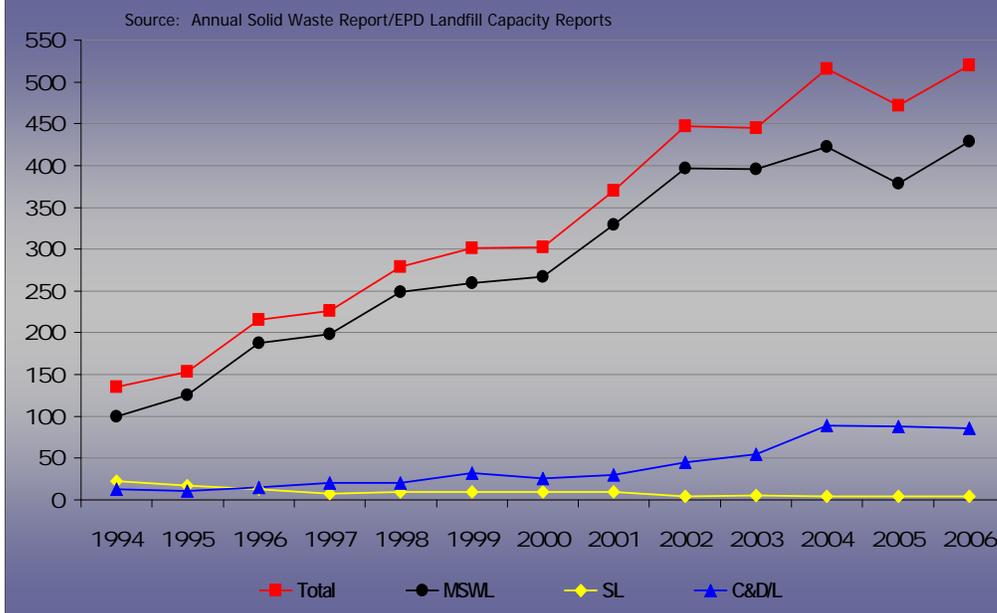


# Per Capita Waste Disposal



# Georgia Disposal Capacity

## Reported in Million Cubic Yards

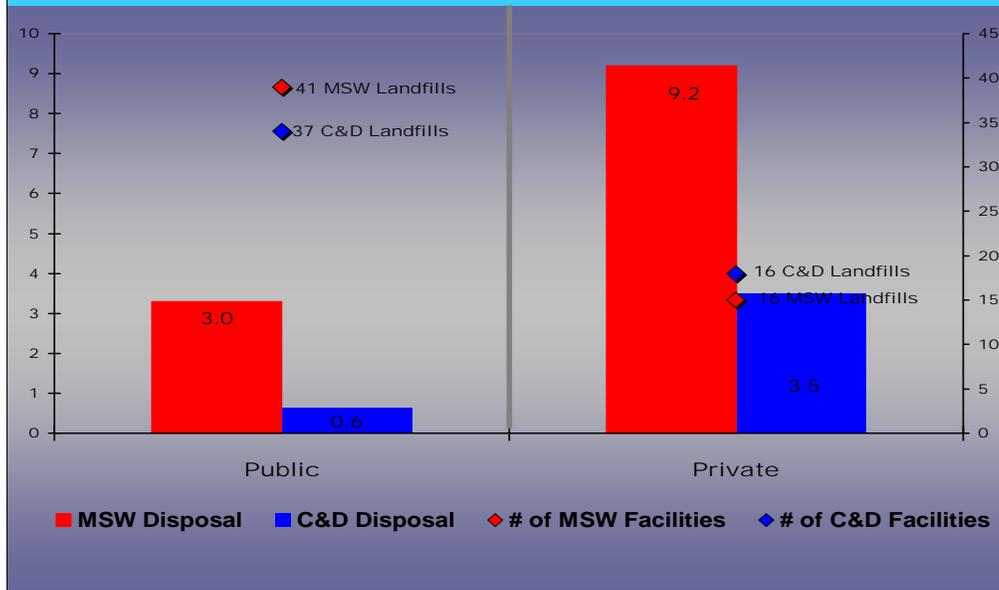


The amount of available permitted landfill capacity (not necessarily constructed capacity) grew steadily from 1994 through 2004. The amount of remaining permitted capacity in “SL” facilities, the old unlined landfills, declined over the past decade. In 1993 there were over 70 unlined landfills in the 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.

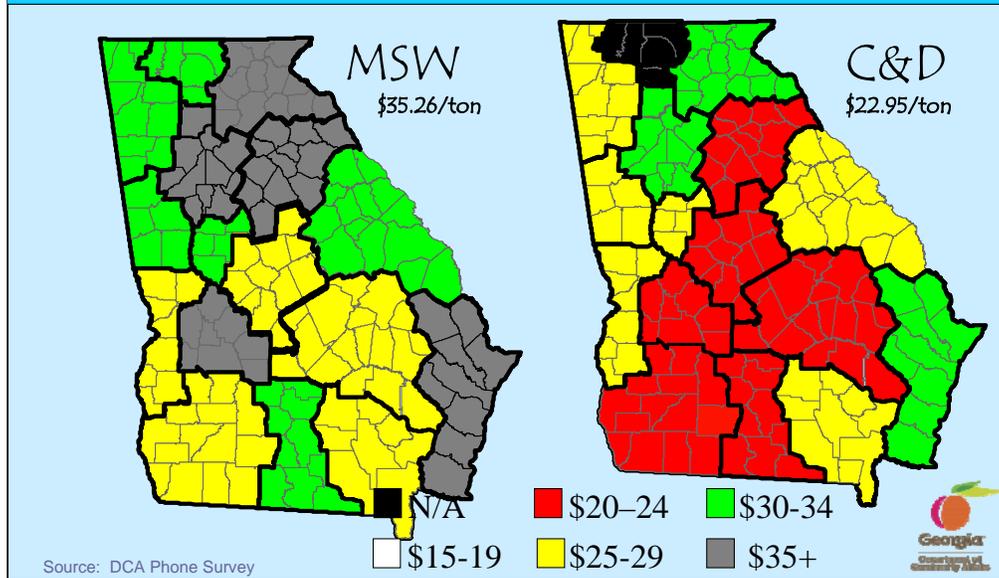
## Georgia Landfill Disposal 2006 Public vs. Private (in million tons)



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.

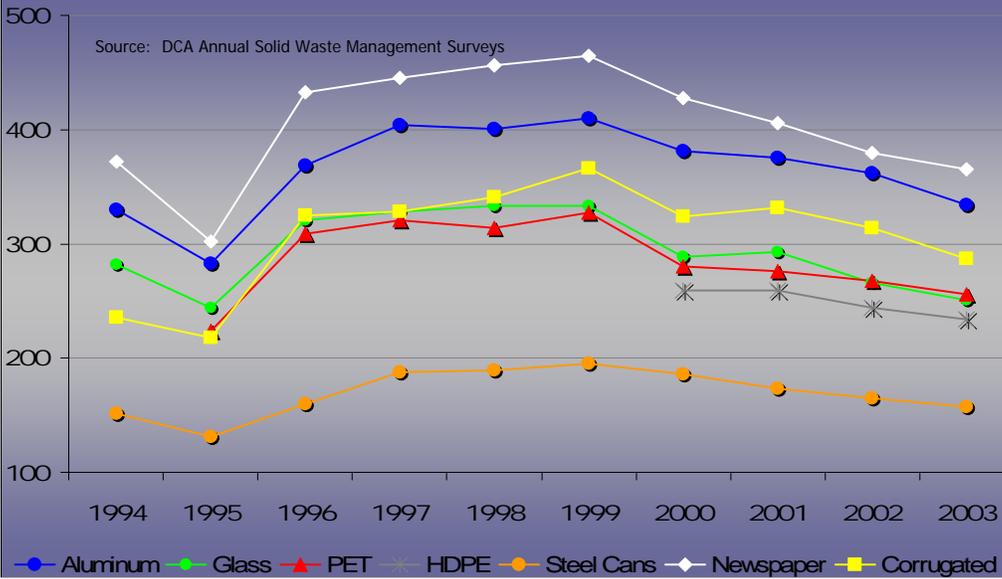
Please note that the tipping fees reported for Georgia are the posted gate rate fees, actual tipping fees vary greatly depending upon the volume of waste delivered to a facility and are often times significantly less than the posted gate rates.

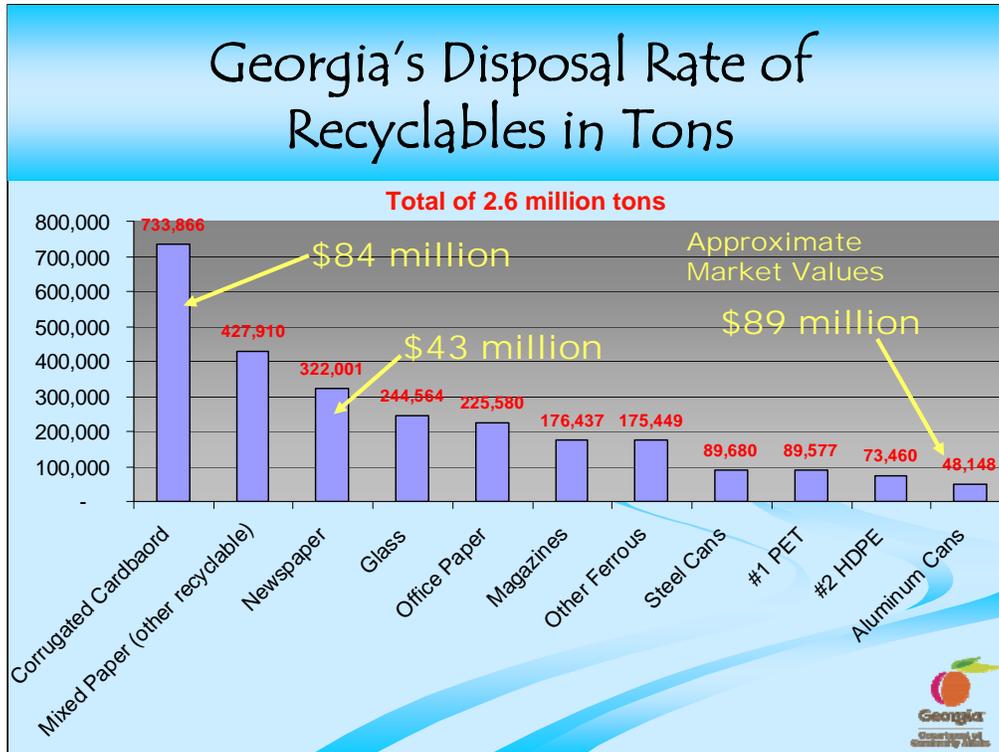
For a complete listing of the average tipping fees in the state by RDC, consult the Annual Solid Waste Report on-line at [www.dca.state.ga.us](http://www.dca.state.ga.us).

# Out-of-State MSW Imports



# Georgia Recycling Programs





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?



# Environment & Economy

- Conservation of Resources
  - Energy
  - Water
  - Land
  
- Vibrant Economy
  - Strong Markets for Recyclables
  - Jobs
  - Product Sales



## **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

Moore  
& Associates



# 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
- 1/3<sup>rd</sup> 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					
Commodity	Actual 2004	Projected 2012	Projected % 2012	Projected 2017	Projected % 2017
Glass	0.153	0.140	8%	0.140	8%
Paper	1.181	1.000	15%	0.850	28%
Metal	0.228	0.198	13%	0.186	18%
Plastic	0.663	0.560	16%	0.530	20%
<b>Total</b>	<b>2.23</b>	<b>1.99</b>	<b>11%</b>	<b>1.71</b>	<b>23%</b>



# 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

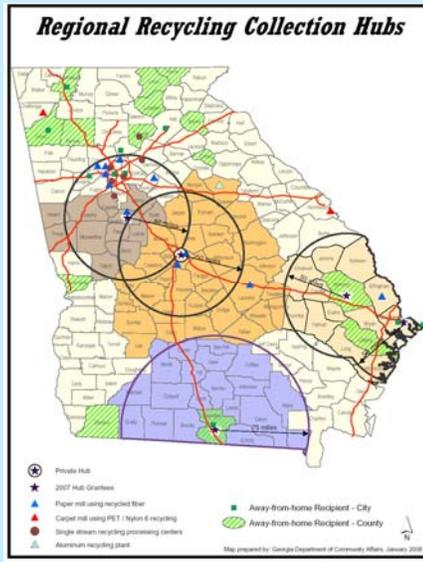


## Statewide Media Campaign (continued)

- 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

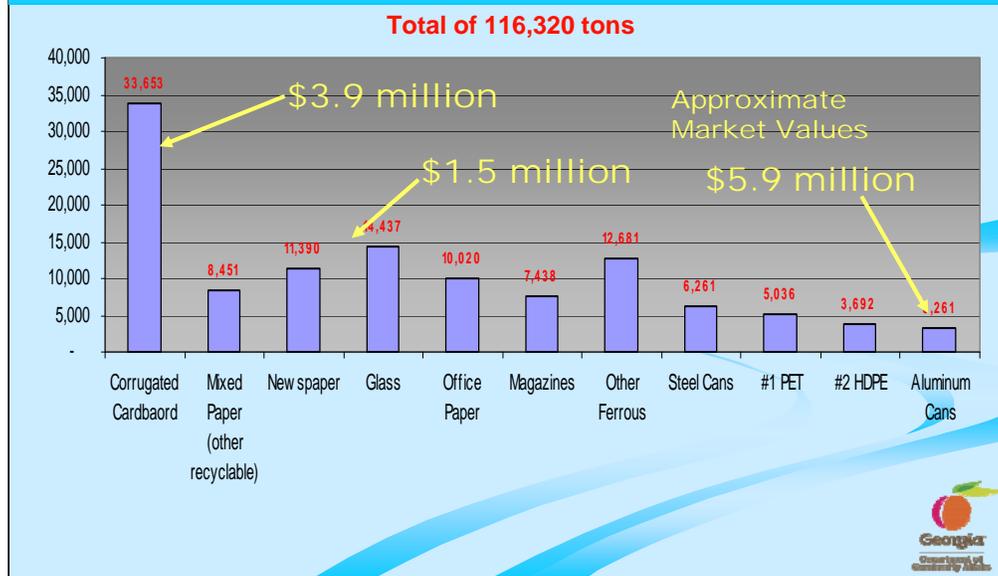


# Griffin Hub

- 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



## Griffin Hub's Service Area Disposal Rate of Recyclables in Tons



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.

# Individual Actions Make a Difference

- Conserves Energy

- Recycling

- 1 glass bottle = 100 watt bulb for 4 hrs
- 1 aluminum can = 3 hrs of computer time
- 1 soft drink bottle = 1 ½ hrs of TV viewing

- Conserves Water

- Recycling

- 5 lbs of paper conserves enough water to “offset” the water used in a typical shower

- Supports Georgia’s Economy



## 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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