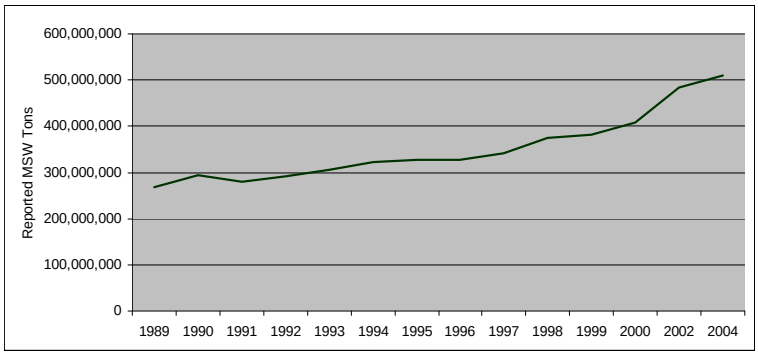
MRF Operations and Revenue

Presented to CRRA Conference

By Harvey W. Gershman
President
August 4, 2008

1

Reported MSW Generation

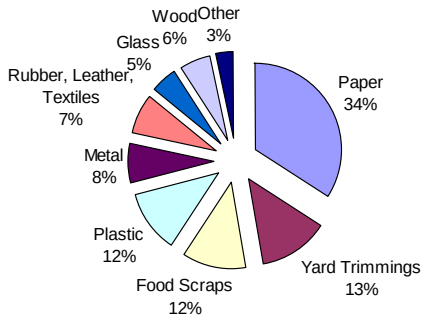


•Source: Biocycle, April 2006

2

Waste Facts

- Each person in U.S. today generates 1,606 lbs. per year
  - 1,752 lbs. per year in 2010
- What is in our waste?
  - Recyclables
    - Feasible now to recycle up to 50-70%
  - Energy content of remainder: 5,500 BTUs per pound
    - Coal at 9,000 BTUs per pound



Total: 245 Million Tons (Before Recycling)

Source: US EPA, 2005 data

GBB SOLID WASTE MANAGEMENT CONSULTANTS

3

Recycling Energy Savings and CO2 Impacts

Source: National Resources Defense Council

Energy Savings Per Ton Recycled					
Materials	**Grade**	**% Reduction of Energy***	**Million BTUs**	**Equivalent in Barrels of Oil**	**Tons CO2 Reduced**
Aluminum		**95**	**196**	**37.2**	**13.8**
Paper**	**Newsprint** **Print/Writing** **Linerboard** **Boxboard**	**45** **35** **26** **26.**	**20.9** **20.8** **12.3** **12.8**	**3.97** **3.95** **2.34** **2.43**	**-0.03** **-0.03** **0.07** **0.04**
Glass	**Recycle** **Reuse**	**31** **328**	**4.74** **50.18**	**0.9** **9.54**	**0.39** **3.46**
Steel		**61**	**14.3**	**2.71**	**1.52**
Plastic	**PET** **PE** **PP**	**57** **75** **74**	**57.9** **56.7** **53.6**	**11** **10.8** **10.2**	**0.985** **0.346** **1.32**
Mixed MSW		**na**	**na**	**na**	**na**

GBB SOLID WASTE MANAGEMENT CONSULTANTS

4

What are your goals?

- ❑ Diversion
- ❑ $$$$
- ❑ Facilities/Services
- ❑ Public-Private Partnerships
- ❑ Union
- ❑ Schedule

GBB SOLID WASTE MANAGEMENT CONSULTANTS

5

What do you have now? What do you want?

- Collection on a task system
- Union contract constraints
- Asset review
- Contracts review
- Organization review
- Maintenance review
- Input from customers
  - *What do they want?*
- Benchmark comparisons to others

GBB SOLID WASTE MANAGEMENT CONSULTANTS

6

What does it cost?

- Full cost management review
- Functionality benchmarking
- Look for areas to improve
- Revenues review
  - *Are all customers being charged?*
  - *Are customers charged the right amount?*

Functionality	Amount
Waste Collect - Contract	$17.29 million
Litter Bin Collect	$0.064 million
Waste Collect - City	$0.57 million
Disposal (North LF)	$12.34 million
Trash Processing (Wood, WG)	$1.11 million
Recyclables Collection	$3.49 million
Recyclables Processing	$0.47 million
Other Reduce/Recycling	$0.28 million
HHW	$0.045 million
Other	$1.08 million
TOTAL COST	$36.74 million

GBB SOLID WASTE MANAGEMENT CONSULTANTS

7

What options to consider?

- Changing collection frequency
- Dual vs. single stream for recyclables
- MRF services from existing or new
- Adding food waste to yard waste
- New carts
- Closing collection market
- Mandatory commercial recycling requirements
- Food waste routes for commercial customers

GBB SOLID WASTE MANAGEMENT CONSULTANTS

8

Recyclables Processing/MRF

MRF = Materials Recovery Facility

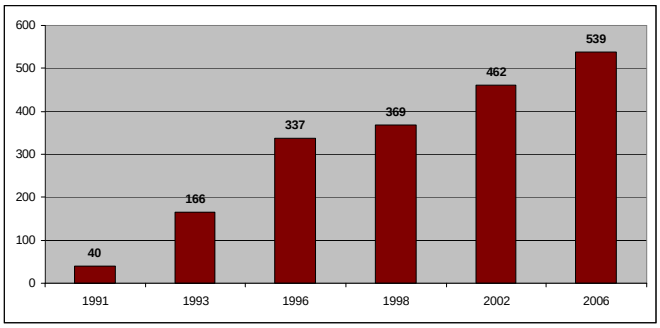
Recyclables sorted by machine, air, magnet, and hand into each marketable material category

Single-stream processing trend now

•Waste Management, Inc., Elkridge, MD

9

MRFs Operating in the U.S.



•Source: Governmental Advisory Associates, Inc.

•Loose Newsprint

•Mixed Paper and baled Aluminum Cans

10

Reaching Greater Diversion Economically

- Combine tonnages for better economies of scale; implement regionally
- Control both residential and commercial collection
  - And, delivered efficiently making use of technologies
- Carts and boxes for recyclables
- Contracting
  - Longer term
  - Collection unbundled from processing and disposal
  - Service Fee formula for processing; market risk sharing
- Variable rate pricing, aka Pay as You Throw
- Aggressive and never ending public education and promotion
- Politics on the +++ side

GBB SOLID WASTE MANAGEMENT CONSULTANTS

Value of Recyclables in One Ton of Waste Sorted and Sold to Markets

Year	$ per Ton Equivalent
1994	$40.00
1995	$104.00
1998	$48.00
2005	$85.00
2008	$150.00

Source: GBB internal data base

12

Residential Container Redemption Value in California Curbside Recyclables
Note: CRV Values are averages of 2002 – 2005

Material	$ / Container (# /Ton)	CRV Avg. Value ($/Ton)	% of Residential Recycling	Weighted Revenue ($/Ton)
Mixed Glass	$ 0.04 (3,740)	$117.00	15.5%	$18.14
Aluminum	$ 0.04 (59,000)	$1,978.25	0.3%	$5.93
PET	$ 0.05 (25,600)	$1,173.56	1.1%	$12.91
HDPE	$ 0.07 (10,200)	$289.73	2.4%	$6.95
Subtotal (CRV Value)				**$43.93 / ton**

GBB SOLID WASTE MANAGEMENT CONSULTANTS

III - 13

Factors that Drive Cost Down

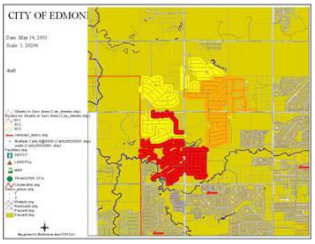
- ✓ Unbundling collection from processing
- ✓ Long-term contracts
- ✓ Automated collection
- ✓ Every other week collection for recyclables and yard waste
  - ✓ Even once per month for recyclables
  - ✓ Seasonal for yard waste
- ✓ Call in bulk service

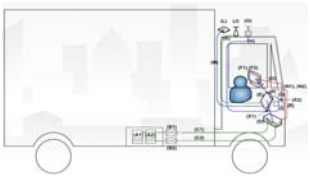
GBB SOLID WASTE MANAGEMENT CONSULTANTS

14

Factors that Drive Cost Down

- ✓ Software and services
  - ✓ Computerized Routing
  - ✓ GPS
  - ✓ Asset management
  - ✓ Customer service
  - ✓ Web site and email reminders for customers
  - ✓ Cell phones, especially Nextels
- ✓ Maintenance contracts
- ✓ Closed market contracting





GBB SOLID WASTE MANAGEMENT CONSULTANTS

15

Public Education And Information

- Assure funding every year
  - $ 3 per capita per year is great
  - $1 per capita per year is maintenance
  - Extra $$ when changes are being made
- Involve public relations capability in designing and branding
- Consistent messaging in all media delivery points
- Dedicated internal staff to carry it out
- Funding included in service contracts so budgets are raided

GBB SOLID WASTE MANAGEMENT CONSULTANTS

16

Common Elements for Successful Recycling Programs

- ✓ Large carts for residents to place mixed paper or single stream materials
- ✓ Large and well marked containers for separated materials
- ✓ Closed market collection services either provided efficiently by municipality or under long-term contract with private service provider
- ✓ Large MRF either publicly owned or under long-term contractor with reasonable revenue sharing back to municipality
- ✓ Pay as you throw charging system or user fees
- ✓ Sustained and excellent public education program
- ✓ Supportive public officials
- ✓ Higher demographics definitely help
- ✓ Urban or suburban environment
- ✓ High avoided disposal costs

GBB SOLID WASTE MANAGEMENT CONSULTANTS

17

Barriers to Increased Residential Recycling – Single-Family Homes

- ❑ Unorganized, open-market, collection services
- ❑ No state of the art MRF at a reasonable scale
- ❑ Elected officials unwilling, not motivated to take on changes needed
- ❑ Un-sustained public education and outreach at an appropriate funding level
- ❑ Lack of mandatory regulations/ordinanaces
- ❑ Storage bins are too small
- ❑ Expensive/inefficient collection services even in closed markets
- ❑ Value of recyclables not getting back to the residences – wrong business model

GBB SOLID WASTE MANAGEMENT CONSULTANTS

18

Santa Monica

- Phase I – Operations and Rate Review
  - Balance the rates
  - How can we increase recycling to 70%?
  - How can we improve our infrastructure?
- Phase II – Procurement
  - Commercial collection services
  - Processing and transfer services
- Phase III – Implementation
  - Contracting
  - Permitting/Financing/Construction
  - Operations

GBB SOLID WASTE MANAGEMENT CONSULTANTS

19

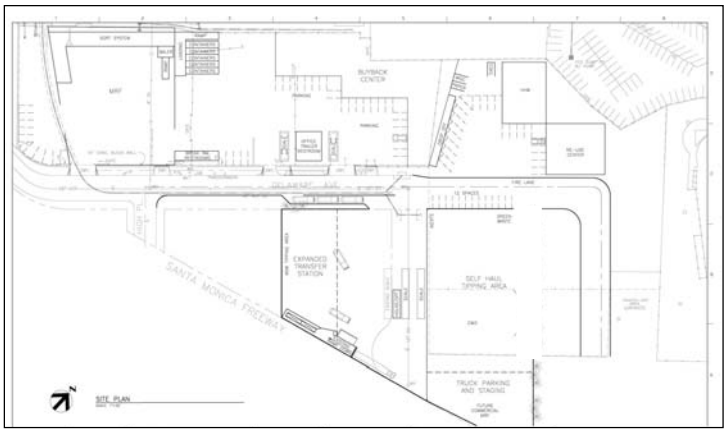
Santa Monica Status

- Collection market closed
  - City awarded all collection services
- Preliminary Term Sheet executed amongst City, Southern California Disposal, Inc., and Allan Company to provide long-term public-private partnerships for contracted processing and transportation
  - SCD to improve existing transfer facility and operate self-hauler area for waste, process residue, C&D, and organics
  - City to provide City Yard for MRF building, convenience drop off, redemption center, and HHW
  - Allan to provide recycling equipment and services
    - Recyclables revenue sharing today would bring approx. $65 per ton net to City (May 2008 values)
- Organics and waste to be transferred to off-site processor for recycling and disposal respectively

GBB SOLID WASTE MANAGEMENT CONSULTANTS

20

Conceptual Facilities Layout



GBB SOLID WASTE MANAGEMENT CONSULTANTS

21

D. Costs

- Allan Company – <u>Pays</u> City
  - $30 per ton for City recyclables plus market revenue share of 50% of value greater than $135 per ton
  - $4.50 per ton host fee for recyclables sold
  - Escalation on revenue and host fee amounts
  - Signing bonus $526,000

GBB SOLID WASTE MANAGEMENT CONSULTANTS

22

D. Costs (Continued)

- SCD – Charges City
  - Transfer facility cost - $14.18 to $16.41 per ton
  - Administrative fee - $1.00 per ton
  - Haul cost (50 mile radius) - $7.10 per ton
  - Total Cost - $22.28 - $24.51 per ton
- Disposal costs pass through
- Escalation on fuel and CPI
- SCD pays Host Fee of $1 per ton landfilled, regardless of source
- SCD purchases City surplus equipment for $213,600

GBB SOLID WASTE MANAGEMENT CONSULTANTS

23

Zero Waste Movement

How much waste is GBB for?

…as little as possible!

GBB SOLID WASTE MANAGEMENT CONSULTANTS

24

Thank you!

Harvey Gershman

1-800-573-5801

hgershman@gbbinc.com

www.gbbinc.com

GBB
SOLID WASTE
MANAGEMENT
CONSULTANTS