LAKE COUNTY

Sustainability & Single Stream Recycling In Florida- *Larry Dalla Betta*

Municipal Manager, Waste Management Recycling Services

SUSTAINABILITY

“Sustainability has become a buzzword for a very powerful and defining idea: a sustainable corporation is one that creates profit for its shareholders while protecting the environment and improving the lives of those with whom it interacts.”

SUSTAINABILITY – THE CONCEPT

“Achieve continuing economic prosperity while protecting the natural systems of the planet and providing a high quality of life for its people”

NEW CHALLENGES REQUIRE NEW SOLUTIONS

- Throughout the World, communities are looking for new, more effective ways to extend landfill life, promote environmental sustainability, fight climate change and lower overall costs through increased solid waste recycling.

* Of all the programs currently in use, none matches the ease, acceptance and cost-effectiveness of Single Stream Recycling.

EVOLUTION of SINGLE STREAM

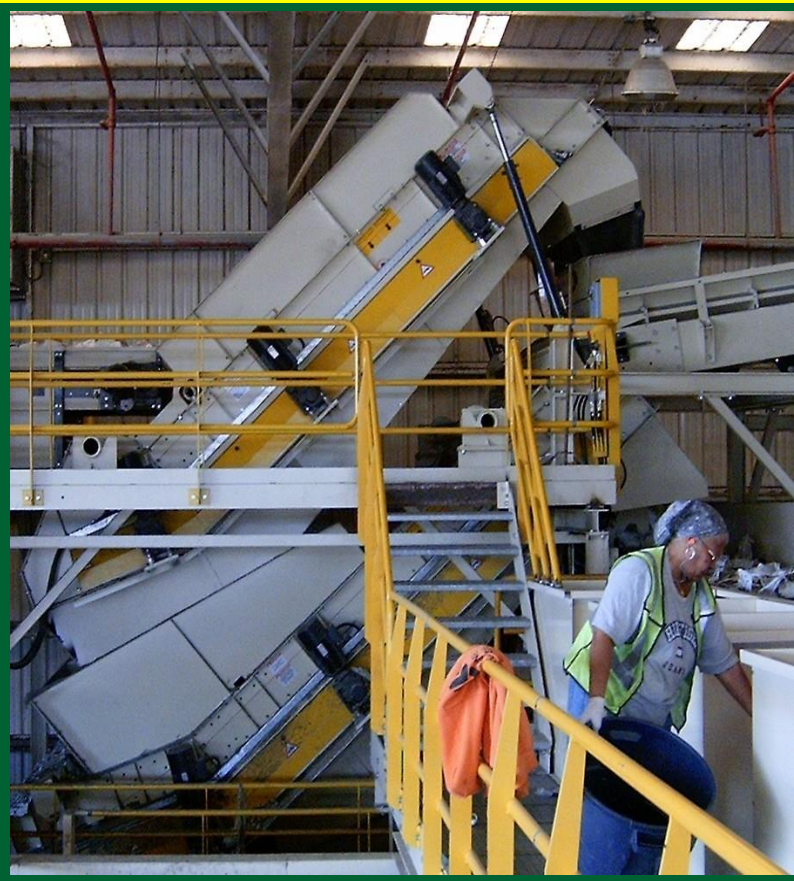
A CASE STUDY

Florida 2005 The Stage Is Set

- Haulers were collecting multi-sort or dual stream
- Required two separate fleets
- Container side portion of the truck would fill faster than fiber side requiring driver to leave the route and unload
- Questioned themselves as to why they could not use a one compartment truck to collect the recyclables mixed
- Reduction in the number of trucks in their fleets, their carbon footprint, noise and traffic in the neighborhoods

The Shift Begins...

- Early MRF's were long and laid out
- Each commodity was a positive pick requiring large amounts of employees
- Equipment manufacturer's responded to processing needs
- Plants became more efficient
- Safety improved dramatically



Dual Stream Collection

- Fiber and containers collected separately
- Confusing
- Multiple containers created storage issues for consumer
- Easier not to recycle
- Low participation
- More material to the landfill

Single Stream Collection

- All recyclable material mixed
- It's Easy!
- One container
- Less room required for container
- Higher participation
- Increased Diversion from landfill

Current and Future Expansion of Program

- Additional municipalities choosing single stream
- Pilot multi-family housing programs
- District wide school system programs
- Commercial single stream programs
- Increased acceptable commodity list at the curb

Education is a Key to Success

- Community Partnerships
- Public Education
- Informational Flyers
- Education Center
- Media
- Minimize Residue

Residential Summary

- The Single Stream approach is a key element in;
  - Reducing the cost per ton of residential recycling
  - Making residential recycling economical and sustainable
  - Growing the residential fiber stream

Single Stream Technology and the changing material compositions

- New sorting technologies
- New MRF Design to meet the changing material composition at the curb
- ONP forecast
- Increase is HH OCC and plastics
- Expanded commodity list

Keys to Economically Sustainable Curbside System

- Single Stream Processing
- Every Other Week Collection with Cart
- No Sort Glass Processing & in some cases, no sort Plastic Processing
- Upgraded & Consistent Public Education

Elements of a Sustainable Residential Curbside Recycling System

- Secure Base Fiber Source (OCC, Mix, ONP * ONP curbside volumes dropping)
- Opportunity to grow fiber sources
- More stable commodity pricing
- More stable supply
- Carts leverage the collection of residential OCC and overall higher volumes per HH/Month
- Inbound Quality

Study – Single Stream Growth

- Industry SS MRF's (GAA Survey) Governmental Advisory Association
  - 2001 = 70 (WM < 10) = 15%
  - 2006 = 160 (WM : 25) = 16% (Current WM SS MRF's =32)
- Daily Throughput
  - SS MRF's 206 TPD
  - DS MRF's 152 TPD
- Overall Processing Capacity (22.1 M Tons)
  - SS MRF's 9.2 M Tons (42%)
  - Other MRF's 12.9 M Tons

Study – Single Stream Growth

- Average Capital Cost (Equipment)
  - DS = 4.9M
  - SS = 7.6M
- Capital Cost per daily Ton of Capacity
  - SS MRF's $66,630
  - DS MRF's $105,690
- Residue Rates (as reported)
  - DS = 6.8% w/glass (196) and 5.8% w/o glass (31)
  - SS = 11.7% w/glass (108) and 8.1% w/o glass (36)

Study – Single Stream Growth

- Increase Volume Collected DS to SS
  - 50% - Gross – Long Term
  - 40% - Net
- Larger size of recycling cart;
- Easier system to participate in;
- Broader range of materials collected

"SS is a Piece of Cake"

YOU BE THE JUDGE

Miami Dade County Conversion to SS: Proof is in the results!

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2007 **Dual**	2248	2460	2588	2509	2680	2610	2446	2452	2313	2811	2778	2501
2008 SS July	2773	2210	2430	2383	2447	2380	2707 "SS" starts	2973	3413	4567	4369	5543
2009 **SS**	5250	4361	4985	4893	4685	5278	5556	4845	4875	4835	4849	5781
2010 **SS**	4975	4509	5043	4950	4726	4844	4998	5263	5014	4948	5271	5526

Miami Dade: Dual vs. Single Stream

Last Year of Dual Stream=30,396 tons

First Full Year of SS=60,193 tons

Over 95% Growth in Volume and Sustained through present

Questions?

Thank You