

Colorado Association for Recycling
2010 Annual Conference

MRF Operations

Single Stream Collection Systems & Education

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WM Recycling : National Overview

100+ Material Recovery Facilities (MRFs)

- ❑ 30+ Single Stream Facilities
- ❑ Not Including Co-Located Sites
- ❑ 24 Construction and Demolition (C&D) Processing Centers

E-Waste

- ❑ 5 e-Cycling Processing Plants

Austin, TX; Oklahoma City, OK; Denver, CO; Minneapolis, MN; Springfield, MA

FUN FACTS:

- Process 7.6 Million Tons/year of Recyclables
- Enough to fill the Empire State Building more than 11 times



Recycling Operations: CO/UT Mkt Area

Colorado/Utah

- ❑ 6 Material Recovery Facilities (MRF's)
- ❑ Services including...
 - ❑ Comm & Resi SS
 - ❑ Post-Industrial Recycling
 - ❑ C&D Processing
 - ❑ e-Cycling
 - ❑ Organics/Composting

FUN FACTS:

- Denver's MRFs process >13,000 tons of paper per month



Single Stream Recycling: Benefits

Increased “Convenience” = Increased “Participation” = Increased “Diversion”

- ❑ Sustainability : Increased Commitment
 - ✓ Drives public/private partnerships
 - ✓ Essential to Long-Term Capital Needs

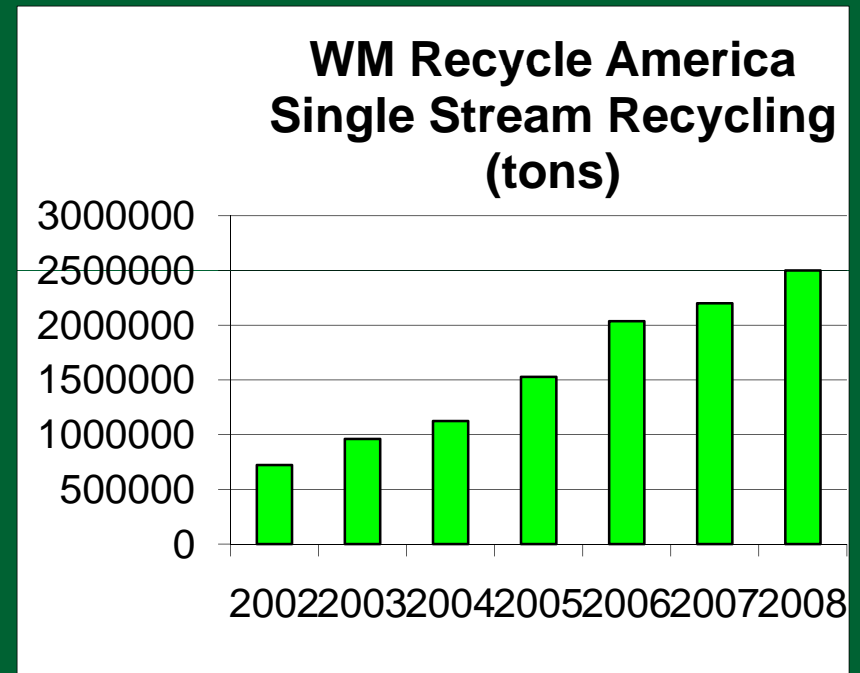
- ❑ Logistics : Reduces Transportation Needs
 - ✓ Avg time per stop
 - ✓ Avg Trucks on street

- ❑ Operational : Increased Safety
 - ✓ Machine vs Manual (Less Risk)
 - ✓ Sharps, Glass, Floor Sort



Single Stream: Human/Behavioral Insights

- ❑ SS Recycling is More Convenient for Individual
- ❑ Increased Participation Rates; Our rates have tripled in the last 6 years.
- ❑ Increased Diversion Rates
- ✓ **Colorado Case Study:** In Denver, recycling participation rates increased 40%



Waste Management Single Stream Material Recovery Facility (MRF)



SS MRF: Operational Takeaways

❑ Manufacturing Environment

- ✓ Transition of Sorting Responsibility from Individual to Processor
- ✓ Source Raw Materials, Conversion Process, Ship *Quality* Finished Goods

❑ Capital Investment

- ✓ Useful Shelf-Life (Wear & Tear, Obsolete)
- ✓ Adapt to Changing Material Stream (pckg changes, ONP decline)

❑ Constant Maintenance

- ✓ Complexity & Quantity of Equipment

❑ Labor Intensive

- ✓ Varies by MRF by Technology (exceeds dual stream)

