



Mecklenburg County's, Conversion to Single Stream Recycling

SWANA, Asheville NC

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By

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Outline

- **Facility Overview**
- **Processing Overview**
- **Project Development**
- **Contract Negotiations**
- **RFP Development**
- **Construction**
- **Education**

Metrolina Recycling Center

- Became operational in 1995
- County owned with Casella/FCR as operating contractor
- US Greenfiber insulation line added in 1999
- About 59,000 tons of recyclables processed in FY 2009



Dual Stream – *current approach*

Dual Stream – a system where recyclables are collected and processed in two parts:

- **Commingled Containers**
 - Glass, aluminum, plastic, steel
- **Fiber or Paper Products**
 - Various paper and cardboard products



Single Stream – *the new method*

Single Stream - a system where targeted recyclables are set out in a single container, collected in a single compartmented truck, received and processed at the materials recovery facility as a single feedstock

Single Stream Advantages

- No need for the resident/collector to separate commingled containers from paper
- Enables automated or semi-automated collection of recyclables
- Ability to process/recover a greater range of materials with new processing equipment
- Eliminates cross-contamination issues in processing



Single Stream Advantages - *more*

- Expansion of the County's internal PaperChase program to include all Single Stream materials
- Replace can & bottle pilot program serving limited CMS schools with Single Stream to all schools
- Greater ability to serve small business and multi-family residential recycling



Getting There – *a long road!*

- June 2004 – County retains consultant to study Single Stream recycling to improve participation/recovery rates
- March 2005 – Completion of Single Stream feasibility assessment – *feasible, technically and economically*
- May 2006 – BOCC approves Solid Waste Management Plan considering Single Stream for further development

Getting There – *the road continues...*

- **February 2008 – Presented the Capital Improvement Program including Single Stream retrofit to Metrolina Recycling Center (MRC) to the WMAB**
- **March 2008 – County Retains a Consultant to Mecklenburg help monitor the contract negotiations for the MRF operating agreement**
- **June 2008 – BOCC approves new 20-year Interlocal Agreements with 7 municipalities incorporating Single Stream**

Getting There – *the road continues...*

- **May 2009 – BOCC approves Solid Waste Management Plan identifying Single Stream as the selected recycling approach**
- **June 2008 – BOCC approves the Capital Improvement Program including Single Stream retrofit to Metrolina Recycling Center**
- **August 2008 – Completion of MRF Bench Marking Study – Included contract evaluations**

Getting There – *the road continues...*

- **May 2009 – BOCC approves new Single Stream operating agreement with Casella/FCR**
- **June 2009 – BOCC approves new lease with US Greenfiber – *produces cellulose insulation from recycled paper***
- **July 2009 – BOCC authorizes a contract with CP Manufacturing to retrofit the County's Metrolina Recycling Center**

Getting There – *the road continues...*

- **Education**

Negotiating the Contract

- **RW – Beck was hired to assist in developing a contract an RFP**
- **Development of key business terms**
- **Development of a contract document**

Developing the Contract

- **Benchmarking**
- **Communication**
- **Legal Review**
- **Approval**

Key Contract Terms

- **Maintenance**
- **Residue**
- **Materials Managed**
- **ISO 14001 Certification**
- **Operating and Contingency Plans**
- **Transition to single-stream**
- **Term of contract**
- **Pricing Structure**

Developing the RFP

- **RW-Beck was hired to assist in developing the RFP and reviewing submitted proposals**
- **FCR was part of team to assure quality design that met Operating Contract Specifications**
- **Procurement Review**
- **Identify your funding sources**
- **Legal Review**

The Procurement Process

- **Development of the RFP**
- **Education**
- **Public versus private methods**
- **Review of the submittals**
- **Selection of a Vendor**

Construction Planning

- Value Engineering and third party review
- December 2009 – Equipment installation begins at the Metrolina Recycling Center.
- Transition Plan – Fiber line shut down, commingled line shut down
- Currently both lines are shut down
- Anticipated Start-up May 17th

Retrofit Stats

- **Equipment Cost - \$7.3 Million – turnkey design, fabricate, install, test and train (Initial Cost \$4.8 Million in 1995)**
- **About 80% new equipment in MRC**
- **Annual Throughput Capacity – 80,000 tons on single shift**
- **Guaranteed Recovery Rate > 90%**
- **Single/Dual Stream Capabilities**

Retrofit Schedule

- **December 2009 – Commenced onsite construction**
- **February & March 2010 – Transition period**
 - Partial shutdowns
 - Offsite transportation of recyclables
- **May 2010 – Substantial completion**
- **June 2010 – Startup testing**
- **July 1, 2010 – Commence Single Stream operation**

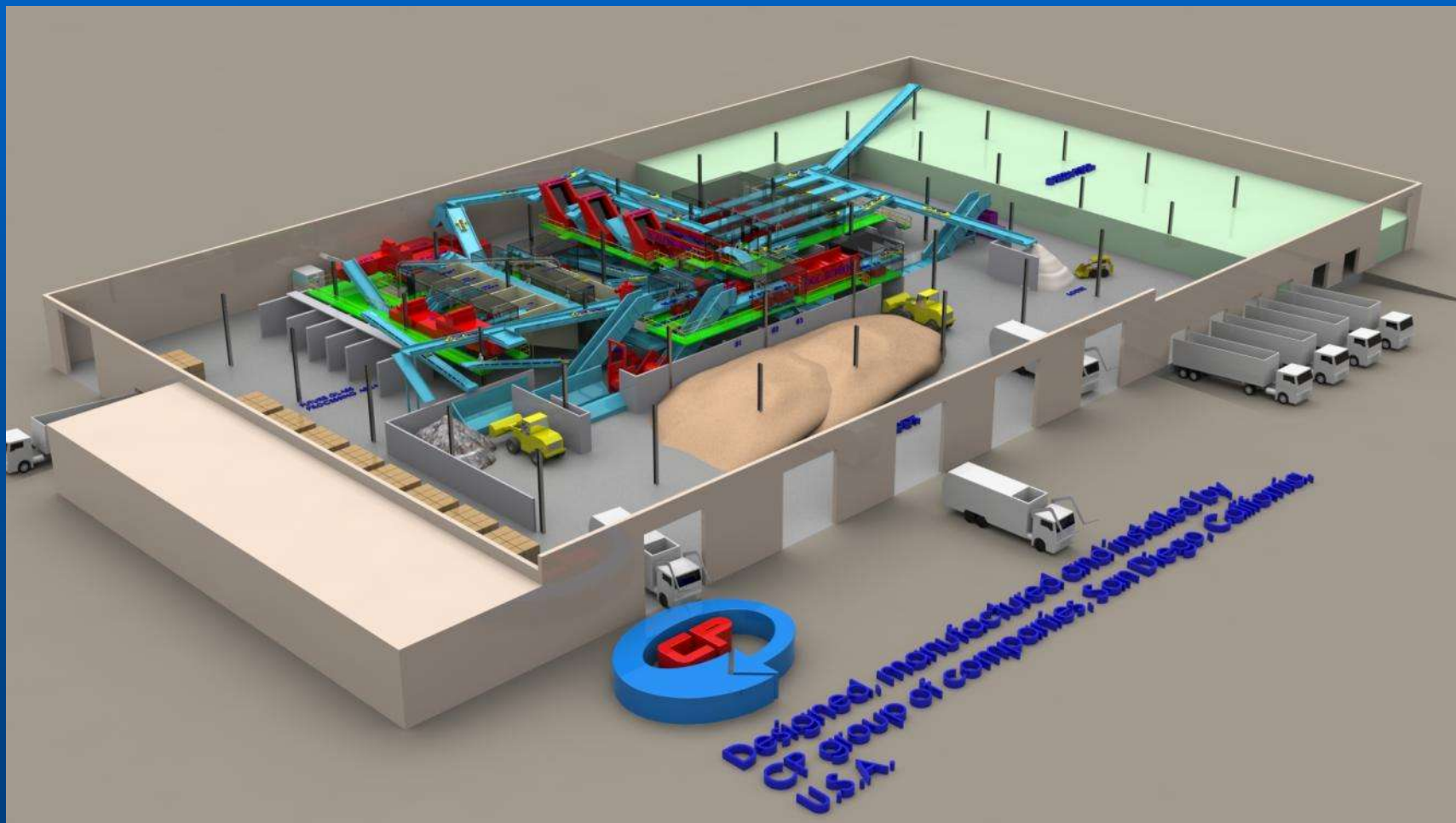
Infrastructure Installation



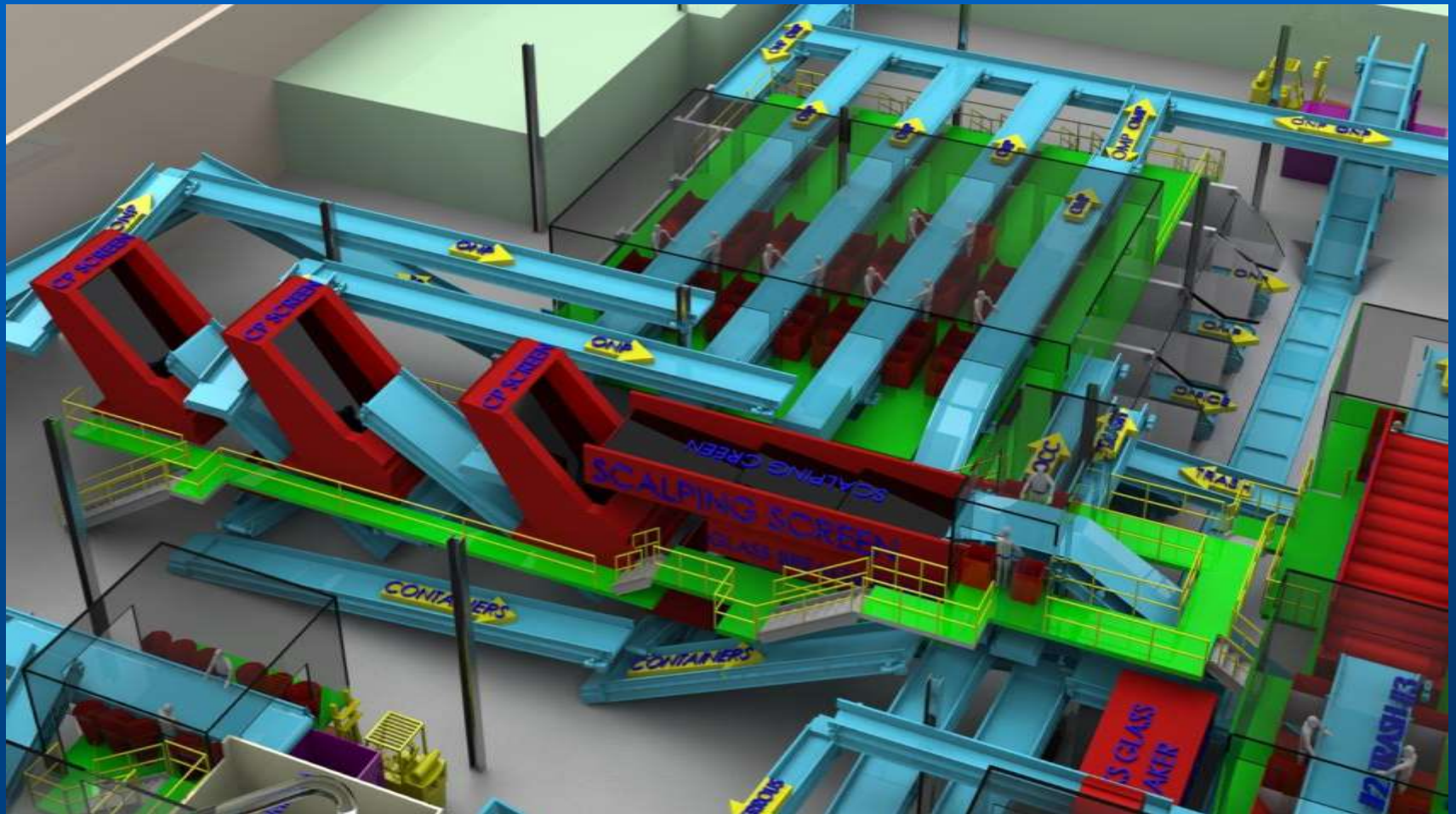
New Infrastructure



New MRC Layout – *isometric*



New MRC Layout – *initial sort*



Equipment Installation



Key New Equipment

- 2D and 3D screens to separate containers from fiber
- Air separator to remove film plastics
- Optical sorting equipment to separate plastics by resin type



Single Stream Materials

Single Stream Delivery Standards

- Single Stream Recyclable Waste consists of the following, loose/compacted, and commingled:
- Glass, transparent and translucent food and beverage bottles and jars of any color. Paper labels are acceptable as are rings and lids on glass containers.
- Tin/Steel cans, tin-plated, food and beverage containers, all sizes; paper labels are acceptable.
- Aerosol Cans – Empty aerosol cans generated through residential usage are acceptable. Valves should be removed.
- Aluminum used beverage containers
- Plastics containers (1 – 7 except 6):
 - All plastic containers (except #6 i.e. Styrofoam).
 - Blow-molded (bottle-necked) containers, including soda bottles, dishwashing soap bottles, shampoo bottles and similar items.
 - Plastic milk jugs, water jugs, detergent bottles, and similar items; caps and labels are acceptable.
 - Injection molded tubs, pots, trays and similar items: caps and labels are acceptable.
 - Motor oil, anti-freeze and paint containers are not acceptable
- Bulky HDPE is defined as large HDPE items (buckets, crates, toys, trays, furniture, bins, barrels etc.). This category is often referred to as “Injection HDPE”. No paint containers are acceptable (i.e. quart, gallon or five gallon containers).
- ONP - old newspapers and advertisement inserts, loose or placed in Kraft (brown) paper bags
- OMG - old magazines containing glossy coated paper, including catalogues, glossy fillers or mailers, loose or placed in Kraft (brown) paper bags,.
- OCC - old corrugated containers (cardboard) that have liners of Kraft, jute, or test liner. Staples and tape with water soluble glues do not have to be removed. OCC can be damp but not soaked.
- Wax-coated OCC containers are not acceptable.
- Kraft (brown) paper bags - all sizes of loose, bundled or bagged Kraft paper grocery sacks.
- Junk mail - all dry, loose or bagged bulk mail consisting of paper or cardboard. All unopened junk mail and envelopes with window are acceptable.
- High-grade paper - all dry, loose or bagged white and colored ledger and copier paper, note pad paper (no backing), loose leaf fillers, computer paper (continuous-form perforated white bond or green-bar paper).
- Boxboard - all non-corrugated cardboard, commonly used in dry food and cereal boxes, shoe boxes, and other similar packaging. Boxboard with wax or plastic coating and boxboard that has been contaminated by food is not acceptable.
- Shredded Paper – All residentially generated shredded paper should be placed in a clear plastic bag.
- Telephone Books
- Maximum allowable contamination rate: 10%
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Single Stream Materials – *new!*

- **All Plastic Containers**
 - Current # 1 PET and #2 HDPE
 - **New #4 LDPE, squeeze bottles**
 - **New #5 PP, yogurt and margarine tubs**
 - No #6 PS - Styrofoam
- **Bulky HDPE (injection mold)**
 - **Buckets, crates, toys, bins, disposable microwave containers**
 - **No paint containers**



Single Stream Materials – *new!*

- Glass bottles and jars of any color, steel cans, aluminum UBC, **empty aerosol cans**
- Fiber – ONP, OMG, OCC, junk mail, kraft bags, high grades, boxboard, telephone book
- No wax coated OCC (pizza boxes)
- **Aseptic/Gable topped containers**



Curbside Recycling Approaches

- **City of Charlotte**
 - New 96 gallon roll out containers
 - Every other week collection, private contractor
- **Towns of Cornelius and Huntersville**
 - New 64 gallon roll out containers
 - Weekly collection, private contractor
- **Towns of Davidson, Matthews, Mint Hill and Pineville**
 - Continued bin collection
 - Weekly collection, private contractor

Closing Remarks

- Keep your partners informed
- Develop a schedule
- Hire the expertise you need.
- Questions?

FOR MORE INFO...

Visit our website at www.wipeoutwaste.com