The Current State of Recycling

Wendy Worley
Division of Environmental Assistance and Customer Service
North Carolina Department of Environmental Quality
State Recycling Program

Division of Environmental Assistance & Customer Service

Recycling and Materials Management Section

• Non-regulatory
• Recycling Business Assistance
• Local government Assistance
• Technical assistance
• Grants
• Studies, Data, Reports
• Conferences, Workshops & Events
Recycling Market Disruptions

• 2017 China announces National Sword
• Unprocessed plastics are BANNED  
  Effective January 2018
• Mixed paper is BANNED  
  Effective January 2018
• Other recovered paper and plastic must not exceed 0.5% contamination  
  Effective March 2018
• Other southeast Asian countries following suit
NC Fiber Pricing
NC Fiber Pricing

Chinese markets stockpile OCC in advance of import restrictions. Import restrictions take effect during the Great Recession.
• Some vendors are currently experiencing record low cardboard prices or disruptions in the ability to sell cardboard

• Temporary issue

• Due to paper mill retooling

• Cardboard market should improve mid-summer
NC Market Prices – Containers

Graph showing the prices of Aluminum, PET, and HDPE-Natural from Feb-99 to Aug-18.
### Value of a Commingled Ton

<table>
<thead>
<tr>
<th>Season</th>
<th>Value (in $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2011</td>
<td>$200</td>
</tr>
<tr>
<td>Summer 2011</td>
<td>$180</td>
</tr>
<tr>
<td>Fall 2011</td>
<td>$160</td>
</tr>
<tr>
<td>Winter 2011/12</td>
<td>$140</td>
</tr>
<tr>
<td>Spring 2012</td>
<td>$120</td>
</tr>
<tr>
<td>Winter 2012</td>
<td>$100</td>
</tr>
<tr>
<td>Spring 2012/13</td>
<td>$80</td>
</tr>
<tr>
<td>Summer 2013</td>
<td>$60</td>
</tr>
<tr>
<td>Fall 2013</td>
<td>$40</td>
</tr>
<tr>
<td>Winter 2013/14</td>
<td>$20</td>
</tr>
<tr>
<td>Spring 2014</td>
<td>$0</td>
</tr>
<tr>
<td>Summer 2014</td>
<td>$20</td>
</tr>
<tr>
<td>Fall 2014</td>
<td>$40</td>
</tr>
<tr>
<td>Winter 2014-15</td>
<td>$60</td>
</tr>
<tr>
<td>Spring 2015</td>
<td>$80</td>
</tr>
<tr>
<td>Summer 2015</td>
<td>$100</td>
</tr>
<tr>
<td>Fall 2015</td>
<td>$120</td>
</tr>
<tr>
<td>Winter 2015/16</td>
<td>$140</td>
</tr>
<tr>
<td>Spring 2016</td>
<td>$160</td>
</tr>
<tr>
<td>Summer 2016</td>
<td>$180</td>
</tr>
<tr>
<td>Fall 2016</td>
<td>$200</td>
</tr>
<tr>
<td>Winter 2016/17</td>
<td>$180</td>
</tr>
<tr>
<td>Spring 2017</td>
<td>$160</td>
</tr>
<tr>
<td>Summer 2017</td>
<td>$140</td>
</tr>
<tr>
<td>Fall 2017</td>
<td>$120</td>
</tr>
<tr>
<td>Winter 2017/18</td>
<td>$100</td>
</tr>
<tr>
<td>Spring 2018</td>
<td>$80</td>
</tr>
<tr>
<td>Summer 2018</td>
<td>$60</td>
</tr>
<tr>
<td>Fall 2018</td>
<td>$40</td>
</tr>
<tr>
<td>Winter 2018/19</td>
<td>$20</td>
</tr>
</tbody>
</table>

China announces plan for import restrictions in June. Import restrictions take effect in July.
Recycling Challenges for Manufacturers

- “Hard-to-recycle” materials
  - Specialty or blended/layered material
  - Most likely not high value material
  - Markets fluctuate -- not worth what it may have been in the past
  - It’s a “buyers market” due to global market changes

- Cost avoidance
  - Best case scenario is a cost neutral solution
  - You will likely have to pay to have material recycled
Don’t forget: Reduce/Reuse

• Could you change the material you are using?
  • Source reduction

• Can you change the packaging to be reusable or reduce the amount of packaging?

• Is your packaging recyclable?

• Will your supplier backhaul the scrap material for recycling?

• Is your waste a resource for someone else?
Find Your Recycling Vendor – Need Help?

• NC DEACS
  • Recycling Section
  • ESI – coaches, listserve, peers
  • Waste Reduction Partners

• NC Recycling Markets Directory

• NC Waste Trader
How Much? How Is It Prepared?

• May need more than one recycling vendor
  • Logistics or brokerage services available

• Truckload quantities preferable
  • Storage

• Aim for mixed loads

• Will your vendor provide equipment?
  • Balers, trailers, Gaylord boxes, densifiers

• Will your company need to purchase additional equipment?
  • Can increase value
  • Tax credits available
What Your Recycler Needs You To Know

• May need more item separation than before
  • Example: Plastics that used to be sold in a mixed bale now need to be separated in order to be marketable

• Less room for sorting errors

• Zero tolerance for contamination
  • Need more education and enforcement

• Recycling is not free and should not be counted on as revenue
  • Recycling is a utility like water, power, internet
Check for Cost Savings

*Trash and Recycling*

- When does your trash contract expire?
- Are the charges correct?
  - Correct number of tips
  - Correct number and size of dumpsters
- Are they “dumping air”?
- Are you paying more than one trash company?
- When is the last time you compared pricing?
- Do you have a contract for recycling services (hauling & processing)?
- Look for cost efficiencies – in recycling storage, handling, containers, hauling methods
Bad News

• Experiencing Down Market
• Cost to Process Recycling is Up
• Little room for contamination

Good News

• We can work on contamination
• Southeast has strong and growing domestic markets
• Recyclers are investing in facilities and equipment
• We have experienced low market values before
NC Recycling Infrastructure
2018 Announcement

Recruiting New Recycling Business to the State

POLYWOOD
manufacturer of outdoor furniture from recycled plastics

Person County, NC

384 Jobs | $35 M Investment

Will consume 34-40 million pounds HDPE each year

RBAC worked with EDPNC & Person County Economic Development to support the company’s NC expansion
Other Market Announcements

**Alabama provides stability for plastics processor**
Import disruptions convinced a longtime Chinese plastics processor to launch a new facility in Alabama. Roy Tech Environ first announced its new facility in February.

**Chinese company to open recycling plant in South Carolina**
Ecomelida will focus on processing cartons and plastic scrap separated from paper pulp.

**UPDATED: Chinese Company Plans To Reopen Wickliffe Paper Mill By The End Of 2018**

**Pratt moves forward on recycled paper mill**
Posted on September 11, 2018

**Nine Dragons Paper to Buy Two U.S. Paper Mills**

**Cascades Acquires Virginia Plant to Produce Recycled Linerboard**
Targeted Grant Funding For Your Recycling Vendors

Recycling Business Grants

2018 – prioritized projects addressing materials affected by China’s policies (mixed paper, non-bottle plastics)

- 21 grants awarded
- 11 involve materials affected by China
- 3 involve MRFs upgrades
Targeted Grant Funding For Your Recycling Vendors

Recycling Business Grants

2019 – prioritized projects addressing materials affected by China’s policies (mixed paper, non-bottle plastics)

17 grants awarded
8 involve materials affected by China
2 involve MRFs upgrades
Thank You

Wendy Worley
Section Chief
Recycling and Materials Management Section
NC Department of Environmental Quality

919-707-8136
wendy.worley@ncdenr.gov

www.recyclenc.org