



Operating a C&D Processing Facility



2016 CRA Spring Meeting
Wilmington, NC

March 2016

Abbey Green

- Recycling center for construction and industrial debris
- 450 tons per day
- Winston Salem on 40 acres – owned and leased
- Serving 18 counties (95% comes from within 20 miles)
- Started operations January 2011
- Facility recycle rate has been between 62% & 80% over 5 years



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Why Recycle?

Customers are motivated to recycle:

1. Cost – Trend is that recycling cannot match landfill cost on tipping fee alone
2. Convenience
3. Social responsibility
4. Specification - LEED credits / NAHB green / Contractors Choosing GreenTM



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Why Recycle?

Communities support recycling:

1. Job creation: One job for each 2000 tons recycled
2. Landfill life extension
3. To support green initiatives



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Recycling Key Indicators



Recycle Rate = $\frac{\text{tons recycled}}{\text{tons received}}$ (can be calculated accurately)



C&D industry rates vary from 20% to 90%

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- Markets for recycled product increase recycling rates
 - Higher tipping fees increase recycling rates (cost avoidance)
 - Estimates are often exaggerated. Little industry accountability – especially LEEDs projects.
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- A small square image showing a construction site with a large structure under development, possibly a bridge or a large building.

Revenue Generated from Product Sales

Revenue per ton received – Should be \$60 per ton minimum to make investment return required

$$= \frac{\$ \text{ tipping fees} + \$ \text{ product sales}}{\text{tons received}}$$

Historically - 2/3 of revenue comes from tipping fees. 1/3 of revenue comes product sales.

Product sales prices have dropped dramatically



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Markets for Recycled Products

Established markets:

- Metals
- Cardboard
- Wood chips for boiler fuel
- Shingles
- On spec (ABC) - crushed concrete

New Markets

- Off spec crushed concrete
- Other inerts - brick
- Carpet - nylon



Markets for Recycled Products

Developing markets:

- Gypsum
- Soils



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What Products are Recycled

Recycled Commodities - 2015		
	%	2015
C&D Received	100.0%	39,451
Crushed Concrete	25.4%	10,018
Boiler Fuel and Mulch	18.3%	7,205
Cardboard	1.2%	466
All Metals	2.5%	970
Gypsum	2.7%	1,050
Compost & Soils	22.3%	8,798
Plastics and Carpet	0.1%	52
Total Recyclable	72.4%	28,559
Total Unrecyclable		10,892

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Markets for Recycled Products

The future – C&D recycle rate could go to 95% plus:

- C&D residual use in boiler fuel
- Co-mingled plastics





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Questions?