GRC Conference
August 20, 2014

Presented By:
Joe Liebau, Jr. – Executive Director
• Nonprofit 501(c)(3) organization

• Mission: to provide waste reduction and recycling assistance for the benefit of business and the environment

• Vision: Transforming Waste Into Resources

• Nationally-recognized and respected

• Supported by members, sponsors, events, fee for service, foundations, partners (public & private)
Services

- Provide specifications and contract language
- Write and review hauling proposals
- Create waste management plans
- Provide technical assistance
- Research/create markets
- Train and educate crews
- Conduct waste audits
- Document results
- Celebrate success
Growing and making a difference

• Every commercial project reduced disposal costs
• Over $4 billion of construction and demolition projects
• Equivalent of 152,624 trees saved by recycling wood and cardboard
• Current projects diverting an average of 90% by weight
• Projects diverted OVER HALF A MILLION TONS of materials from landfills

That’s approximately

552 miles of dumpsters laid end-to-end
WE SHARE
Construction and Demolition Recycling
Training and Accreditation
Waste Generation - Nationally

- Municipal Solid Waste: 243 million tons (41%)
- Building-related C&D: 170 million tons (59%

(US EPA 2009)
Requiring recycling and documentation

- Cities, counties, states across the nation
- Contractors setting company-wide goals
- Developers requiring project-wide rates
- Architects including reporting in specifications
- LEED
- Green Guidelines for Healthcare and many, many more
- Zero waste programs
Georgia – Quick Facts

- 20% of all waste generated in Georgia is Construction and Demolition related.
- The landfill tip weight per ton in Georgia for C&D material runs between $20-40 per ton. (Georgia Department of Community Affairs 2010)
- Georgia allows for 5% of new asphalt to contain post consumer shingles.
Why Recycle?

- Economics – Disposal costs reduced
- Requirement and market demand – Becoming “the way it is”
- Ease – Contractors find recycling simple and not time consuming
- Safety – Recycling sites tend to be cleaner, safer work sites
- Positive public image for projects
Common Recycling Strategies
Waste Reduction
Building Projects
What Can/Cannot Be Recycled?
What Are The Recycled Materials Used For?
WasteCap TRACE
WASTECAPE

Transform Resources and Conserve Energy™

WasteCapTRACE®

Online documentation system
Track C&D debris recycling results
WHY TRACE?

- Created to help State of Wisconsin projects track reuse and recycling results on individual C&D projects and across all projects
- State of Wisconsin has been using the system since January 1, 2010
**Final Report**

**Extreme Makeover Home Edition - Buffalo, NY**

<table>
<thead>
<tr>
<th>Material</th>
<th>Weight ( tons )</th>
<th>Volume ( yd³ )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardboard</td>
<td>31.52</td>
<td>72.00</td>
</tr>
<tr>
<td>Concrete/Masonry</td>
<td>136.09</td>
<td>121.00</td>
</tr>
<tr>
<td>Drywall</td>
<td>2.35</td>
<td>10.00</td>
</tr>
<tr>
<td>Metal</td>
<td>10.11</td>
<td>49.00</td>
</tr>
<tr>
<td>Reuse</td>
<td>80.59</td>
<td>184.04</td>
</tr>
<tr>
<td>Wood</td>
<td>9.23</td>
<td>82.38</td>
</tr>
</tbody>
</table>

**PROJECT TOTALS**

- **Total Diverted**: 279.69 tons, 518.42 yd³
- **Total Solid Waste**: 66.99 tons, 317.99 yd³
- **Total Materials**: 346.28 tons, 836.42 yd³

**Diversion Rate**: 80.83% - 61.98%

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**Waste Management Plan**

- Scope/Goals:
  - The project is the deconstruction and removal of a building that was constructed in part on-site. The project's objective is to minimize waste and recycling.
  - Project Recycling Goal: 75%

**Tickets**

<table>
<thead>
<tr>
<th>Ticket Date</th>
<th>Ticket #</th>
<th>Material</th>
<th>Sub-Type</th>
<th>Weight (tons)</th>
<th>Volume (yd³)</th>
<th>Header</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/13/2009</td>
<td>461433</td>
<td>Metal</td>
<td></td>
<td>0.53</td>
<td>10.00</td>
<td>WM</td>
<td>WM Recycling</td>
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<tr>
<td>11/13/2009</td>
<td>448559</td>
<td>Solid Waste</td>
<td></td>
<td>0.62</td>
<td>8.00</td>
<td>WM</td>
<td>WM PPE/Transfer</td>
</tr>
</tbody>
</table>

**Notes**

- REDUCE AND REUSE - It is intended that the project shall generate the least amount of waste due to error, poor planning, breaking, mishandling, etc.
- RECYCLE - As many of the waste materials as economically feasible shall be reused, or if materials are not reusable, proper disposal shall be maintained. The project has a goal of 75% waste and recycling rate.
Input

* No duplication of data entry
* Waste Management Plan
* Contractor, Hauler or Waste Manager can enter data
* Maintains data privacy
* Integrate with existing systems

Output

* How much is my project recycling this month? All projects?
* Progress Reports
* Final Reports
* Meet requirements for construction waste management specifications, certification programs
Landing page shows you at-a-glance how you are doing toward your project goals.
Wizard-process allows for easy creation of a waste management plan (required by specifications and certification programs)

The project is the deconstruction and removal of an existing home and the new construction of a 3,300 ft² wood-framed home which was constructed, in part, off site. The project is seeking a NAHB Emerald Rating.

1. REDUCE AND REUSE – It is intended that the project shall generate the least amount of waste possible and that methods shall be used that minimize waste due to error, poor planning, breakage, mishandling, contamination, or similar factors.
2. RECYCLE – As many of the waste materials as economically feasible shall be reused, salvaged, or recycled. Waste disposal in landfills shall be minimized. The project has a goal of a 75% reuse and recycling rate.
# Materials Summary Report

<table>
<thead>
<tr>
<th>Material Name</th>
<th>Weight (tons)</th>
<th>Volume (yd³)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diverted Materials</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bottles &amp; Cans</td>
<td>0.42</td>
<td>16.80</td>
</tr>
<tr>
<td>Office Paper</td>
<td>7.31</td>
<td>39.70</td>
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<tr>
<td>Other</td>
<td>4,297.95</td>
<td>2031.30</td>
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<tr>
<td>Roofing</td>
<td>21.50</td>
<td>100.00</td>
</tr>
<tr>
<td>Rags</td>
<td>28,905.59</td>
<td>0.00</td>
</tr>
<tr>
<td>Wood</td>
<td>5,615.88</td>
<td>39348.46</td>
</tr>
<tr>
<td>Drywall</td>
<td>1,031.20</td>
<td>4890.58</td>
</tr>
<tr>
<td>Concrete/Masonry</td>
<td>115,952.81</td>
<td>163832.88</td>
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<tr>
<td>Asphalt</td>
<td>10,009.81</td>
<td>1815.00</td>
</tr>
<tr>
<td>Cardboard</td>
<td>1,153.44</td>
<td>2295.07</td>
</tr>
<tr>
<td>Metal</td>
<td>11,339.63</td>
<td>26331.85</td>
</tr>
<tr>
<td><strong>Total Diverted</strong></td>
<td><strong>178,345.52</strong></td>
<td><strong>261,363.64</strong></td>
</tr>
</tbody>
</table>

| Solid Waste            |               |              |
| Solid Waste            | 18,993.65     | 111,450.84   |

| **Total Solid Waste**  | **18,993.65** | **111,450.84** |

| **Total for All Materials** | **197,339.17** | **372,814.48** |

| Diversion Rate         | 90.38%        | 70.11%        |
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For more information on upcoming trainings and webinars please go to: Wastecap.org

Next training is at the Resource Recycling Conference in New Orleans September 15!