C&D Management in the Northeast

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C&D Management in the Northeast in 2013

- Materials from building construction, renovation, & demolition
- Processors: focus on “mixed” C&D
  - Facilities handling mainly ABC from road & bridge projects not included* - would dwarf tonnages
  - Facilities handling mainly land clearing wood also not included*

* to the extent that was possible
C&D Management

- Previous study covered 2006 disposal, landfill uses, & recovery
- New study presents 2013 data – most recent year available
- Landfill uses not considered recovery
  - Shaping & grading
  - Roads
  - Alternative daily cover (ADC)

C&D Management

- CT, ME, MA, NH, NJ, NY, RI, & VT
- Data from facilities that report to states
  - For example, data on recycling direct from job sites is not collected by states
- Data collection effort started in 2015
  - State resources limited
    - Follow-up with non-reporters
    - Enter data in their database systems
    - QA/QC data
Disposal

Shipped for Disposal

Figure 2: 2013 C&D Generated by State and Disposed (tons)

<table>
<thead>
<tr>
<th></th>
<th>CT</th>
<th>ME</th>
<th>MA</th>
<th>NH</th>
<th>NJ</th>
<th>NY</th>
<th>RI</th>
<th>VT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exports to non-NEWMOA</td>
<td>555,191</td>
<td>5,536</td>
<td>230,398</td>
<td>0</td>
<td>1,296,350</td>
<td>1,143,189</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Exports to NEWMOA States</td>
<td>221,948</td>
<td>2,294</td>
<td>122,133</td>
<td>5,920</td>
<td>4,972</td>
<td>21,951</td>
<td>3,240</td>
<td>27,332</td>
</tr>
<tr>
<td>Disposed of In-State</td>
<td>140,299</td>
<td>297,621</td>
<td>124,890</td>
<td>205,340</td>
<td>597,459</td>
<td>3,186,429</td>
<td>90,115</td>
<td>47,696</td>
</tr>
</tbody>
</table>
Where exported to?

CT: MA, NY, & OH  
MA: ME, NH, & OH  
NJ: OH & PA  
NY: OH & PA  
VT: NH & NY

Changes From 2006

- Much less in 2013: CT, ME, MA, & VT  
  - CT exports to non-NEWMOA states almost 1/2  
  - MA exports to NEWMOA states almost 2/3 less  
  - ME & VT less in-state disposal  
- Less: NH (in-state disposal)  
- About the same: NJ  
  - In-state disposal ↑ & non-NEWMOA exports ↓  
- More: NY & RI  
  - In-state disposal ↑
Disposed in State (includes imports)

Figure 3: 2013 Total Quantity of C&D Disposed of In-State (tons)

<table>
<thead>
<tr>
<th>State</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT</td>
<td>565</td>
</tr>
<tr>
<td>ME</td>
<td>0</td>
</tr>
<tr>
<td>MA</td>
<td>213,535</td>
</tr>
<tr>
<td>NH</td>
<td>0</td>
</tr>
<tr>
<td>NJ</td>
<td>0</td>
</tr>
<tr>
<td>NY</td>
<td>0</td>
</tr>
<tr>
<td>RI</td>
<td>0</td>
</tr>
<tr>
<td>VT</td>
<td>0</td>
</tr>
</tbody>
</table>

Where imported from?

**ME**: MA

**MA**: CT

**NH**: MA

**NY**: CT & Ontario
Changes From 2006

- Disposal at facilities in ME, MA, NJ, & VT ~50% less in 2013
  - ME: from out-of-state down 210K tons & also less in-state material
  - MA, NJ, VT: reductions mostly from in-state material
- Disposal in NH down ~25% (in-state material)
- Disposal in NY & RI up (in-state material)

Notes: Disposal

- Data from disposal facilities
  - Not from exporting transfer station/processor (Unless additional detail known)
- Out-of-state imports might be missed
  - Comes into another in-state facility beforehand (Disposal facility records as in-state material)
- CT: most processed C&D debris reported as exported for disposal – some might be landfill uses
Processing

Inputs to Processors

Figure 4: 2013 C&D Inputs at Processors (tons)

<table>
<thead>
<tr>
<th>Tons</th>
<th>CT</th>
<th>ME</th>
<th>MA</th>
<th>NH</th>
<th>NY</th>
<th>RI</th>
<th>VT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imports non-NEVMOA</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Imports NEVMOA States</td>
<td>56,527</td>
<td>145,438</td>
<td>8,506</td>
<td>189,560</td>
<td>0</td>
<td>137,972</td>
<td>0</td>
</tr>
<tr>
<td>In-State Generated</td>
<td>987,513</td>
<td>82,562</td>
<td>565,422</td>
<td>105,701</td>
<td>3,705,406</td>
<td>134,977</td>
<td>0</td>
</tr>
</tbody>
</table>
Where imported from?

CT: MA & NY
ME: MA
NH: MA
RI: MA

Changes From 2006

Less processed in 2013
- CT: in-state generated 200K tons less
- MA: in-state 350K tons less
- NH: in-state 80K tons less
- NY: In-state 500K tons less

Slightly more processed in 2013
- ME & RI: in-state less & imported more
Processor Outputs

Changes From 2006

- **Disposal in 2013**
  - Processors in CT & MA sent 200K tons less

- **Landfill Uses in 2013**
  - More sent from processors in ME, NH, & RI
    - 100K tons more from ME processors
  - Less from processors in MA & NY
    - 350K tons less from MA processors
Changes From 2006

Recovery in 2013
- Less from processors
  - ME (-65K tons)
  - NH (-60K tons)
  - NY (-800K tons)
- Similar tonnages in CT & RI
- MA processors
  - More tonnage (+195K)
  - Higher percent of incoming material recovered

Notes: Processing
- Double-counting eliminated, as feasible
  - TS/processor transfers to another processor
- NJ: Does not collect origin of material from recycling processors (cannot distinguish C&D from other sources)
- NY: Includes all C&D materials processors – a lot of large facilities – tried to remove
- RI: Largest facility may not provide accurate data
- VT: No processors in 2013
Recovery

Categories

- Asphalt shingles
- Aggregates (ABC)
- Gypsum drywall
- Wood
  - “Clean”
  - “C&D” adulterated
- Metal
Recovery from Processors

Changes From 2006

- Asphalt Shingles: only material recovered at higher tonnages regionwide in 2013
- Aggregates*: ↑ CT & MA & ↓ NH & RI
- Gypsum Wallboard: ↑ CT & MA & ↓ NY
- Clean Wood: ↑ ME, MA, RI & ↓ CT & NY
- Metal*: ↑ MA & RI & ↓ CT, NH, & NY

*ME facilities do not report
^NY data uncertainty
Changes From 2006

C&D Wood:
- Significant decreases in
  - ME: 95K tons → 35K tons
  - NH: 126K → 57K
  - NY: 136K → 42K
  - RI: 22K → 7K
- MA processors – recovery up by 109K tons

- State sections
- Estimated generation & discussed markets
- Key findings:
  - Overall, 10% of generation was recovered
    - In some states, majority of C&D debris was processed but most became ADC or was disposed of
    - In some states, a lot of C&D debris went directly to disposal, so processors handled higher quality inputs & recovered higher percentage of what they received
  - Metal only material recovered by processors at a high percent of generation (53% regionwide)
NEWMOA C&D Debris Activities

- **Common Data Collection** (2012)
  - Processing facilities
  - Consistent terms & data categories
  - Implemented by NH

- **Policy Options - Gypsum Wallboard** (2010)
  - Ban disposal
  - Require recycling on state-financed projects
  - Require waste management planning
  - Improve data – improve transparency
  - Extended producer responsibility (EPR)

Related Activities

- **Beneficial Use Determinations (BUDs)**
  - Includes landfill uses of C&D debris
  - Database of BUDs issued by 27 states
    - For use by states and EPA
    - Not exhaustive
    - No longer funded

- **Soil Reuse Management**
  - Workgroup: Solid Waste & Waste Site Cleanup
  - Forum to share information & ideas
NEWMOA

- Non-profit, non-partisan interstate association
- Solid waste, materials management, hazardous waste, waste site cleanup, toxics reduction, pollution prevention, & sustainability programs
- CT, ME, MA, NH, NJ, NY, RI, & VT
- Formally recognized by EPA in 1986
- www.newmoa.org

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