Recycling Means Business in Connecticut

CT Solid Waste Management Advisory Committee
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Bureau of Materials Management and Compliance Assurance
Environmental Value of Recycling

- Saving Natural Resources
- Saving Energy
- Reducing GHG

- 85% less energy
- 70% less energy
- 40% less energy
CT’s Recycling Saved Valuable Resources

865,418 tons of materials recycled:

• Saved total of 7,767,053 million BTUs of energy
  (= to 6.5% energy used in CT in one year
  = to 62,517,484 gallons of gasoline).

• Reduced greenhouse gas emissions by
  398,938 metric tons of carbon equivalents (MTCE).

61,071.09 tons of scrap metal and glass recycled in 2008 means CT conserved natural resources, including:
  – 6,893 tons of limestone.
  – 45,293 tons of iron ore.
  – 25,364 tons of coal.

Recycling 461,734.82 tons of newspapers, phone books, office paper, textbooks, magazines and cardboard is carbon sequestration benefit equal to:
  – 25,230,758 tree seedlings growing for ten years.

Source: Northeast Recycling Council, Inc., 2008 data
Collected Recyclables = Local Sources of Raw Materials

Pounds/Person/Year (PPY) MSW Estimated Disposed & Recycled

Based on Reports Submitted to the CT DEP

<table>
<thead>
<tr>
<th>Year</th>
<th>Recycled</th>
<th>Disposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY1992</td>
<td>329</td>
<td>1,426</td>
</tr>
<tr>
<td>FY1996</td>
<td>415</td>
<td>1,421</td>
</tr>
<tr>
<td>FY2000</td>
<td>435</td>
<td>1,463</td>
</tr>
<tr>
<td>FY2004</td>
<td>468</td>
<td>1,532</td>
</tr>
<tr>
<td>FY2008</td>
<td>494</td>
<td>1,448</td>
</tr>
</tbody>
</table>
## Jobs Created for Every 10,000 tons waste generated (annually)

<table>
<thead>
<tr>
<th>Activity</th>
<th># Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reuse – (wooden pallet repair to computer reuse)</td>
<td>28-296</td>
</tr>
<tr>
<td>Recycling-based manufacturers</td>
<td>25</td>
</tr>
<tr>
<td>MRF [IPC]</td>
<td>10</td>
</tr>
<tr>
<td>Composting</td>
<td>4</td>
</tr>
<tr>
<td>Landfilling and incineration</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: *Recycling Means Business, 2006*
Institute for Local Self Reliance
[www.ilsr.org/recycling/recyclingmeansbusiness.html](http://www.ilsr.org/recycling/recyclingmeansbusiness.html)
## Creates Jobs & Revenues

<table>
<thead>
<tr>
<th>Recycling and Reuse Establishments</th>
<th>Northeast</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>People Employed</th>
<th>206,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Payroll</td>
<td>$6.8 billion</td>
</tr>
<tr>
<td>Annual Revenues</td>
<td>$44 billion</td>
</tr>
</tbody>
</table>

Source: Recycling Economic Information Study, June 2000, NERC  
www.nerc.org/recycling_makes_sense.html
**Estimates of Direct Economic Activity**
Annual Payroll and Estimated Receipts are in $1,000. Throughput is in Thousands of Tons.

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Recycling Collection</th>
<th>Recycling Processing</th>
<th>Recycling Manufacturing</th>
<th>Reuse and Remanufacturing</th>
<th>Industry Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishments</td>
<td>9,247</td>
<td>12,051</td>
<td>8,047</td>
<td>26,716</td>
<td>56,061</td>
</tr>
<tr>
<td>Employment</td>
<td>32,010</td>
<td>160,865</td>
<td>759,746</td>
<td>169,183</td>
<td>1,121,804</td>
</tr>
<tr>
<td>Annual Payroll</td>
<td>956,875</td>
<td>3,826,360</td>
<td>29,181,749</td>
<td>2,747,498</td>
<td>36,712,482</td>
</tr>
<tr>
<td>Estimated Receipts</td>
<td>1,974,516</td>
<td>41,753,902</td>
<td>178,390,423</td>
<td>14,182,531</td>
<td>236,301,371</td>
</tr>
<tr>
<td>Estimated Throughput(^1)</td>
<td>191,082</td>
<td>191,082</td>
<td>157,545</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

\(^1\) Throughput is amount of recovered material recycled and includes manufacturing scrap sent for recycling. It excludes materials prepared for fuel use and in-house process scrap returned to the manufacturing process. Throughput estimates are summed to avoid triple counting at collection, processing, and manufacturing stages.
<table>
<thead>
<tr>
<th>Industry Sector</th>
<th>Federal</th>
<th>State</th>
<th>Local</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling Collection</td>
<td>200</td>
<td>100</td>
<td>100</td>
<td>400</td>
</tr>
<tr>
<td>Recycling Processing</td>
<td>700</td>
<td>400</td>
<td>300</td>
<td>1,400</td>
</tr>
<tr>
<td>Recycling Manufacturing</td>
<td>5,400</td>
<td>2,600</td>
<td>2,100</td>
<td>10,000</td>
</tr>
<tr>
<td>Reuse/Remanufacturing</td>
<td>600</td>
<td>300</td>
<td>200</td>
<td>1,200</td>
</tr>
<tr>
<td>Total</td>
<td>6,900</td>
<td>3,400</td>
<td>2,600</td>
<td>12,900</td>
</tr>
</tbody>
</table>

Contribution of Recycling and Reuse to Government Revenues - Direct Effects Revenues (in $ millions) – nationally  
(Source: EPA, 2002)
Comparison of Industry Employment

The chart compares the number of jobs across various industry types. The industries are listed on the x-axis, and the number of jobs is on the y-axis. The industries include:

- Recycling and Reuse
- Waste Management
- Machinery Mfg.
- Auto and Trucking Mfg.
- Food Mfg.
- Computer and Electronic Mfg.
- Mining
- Insurance

The highest number of jobs is in the Insurance industry, followed by Computer and Electronic Mfg., Food Mfg., Auto and Trucking Mfg., Machinery Mfg., and Waste Management. Recycling and Reuse has the lowest number of jobs.
Comparison of Annual Wages per Job

Industry Type

- All Paid Jobs
- Recycling and Reuse
- Waste Management
- Machinery Mfg.
- Auto and Trucking Mfg.
- Food Mfg.
- Computer and Electronic Mfg.
- Mining
- Insurance
Recycling Manufacturing Industry Employment by Major Material Group
### Analysis of Economic Activity for the Reuse Industry Nationally (source: EPA, 2002)

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishments</td>
<td>26,716</td>
</tr>
<tr>
<td>Employment</td>
<td>169,183</td>
</tr>
<tr>
<td>Annual Payroll</td>
<td>$2,747,498,000</td>
</tr>
<tr>
<td>Estimated Revenue</td>
<td>$14,182,531,000</td>
</tr>
</tbody>
</table>
Bottom Line

Recycling and Reuse = environmental value and economic opportunity
Waste-Based Businesses

Why Not In Connecticut?
WE NEED ENTREPRENEURS
We need creative thinkers
CURRENTLY...

- Plastic, metal, glass, paper
- Carpet recycling
- Mattress recycling
- Gypsum wallboard recycling
- Chip & candy wrappers repurposing
- Building materials – reuse/repurpose
- Cork recycling
Happening in Connecticut

- Residential metal cans, foil
- Residential glass bottles
- Residential plastics
- Paper
- Cardboard
- Scrap Metal
- Wood – reused, recycled
- Lumber – reclaimed/reused
- Electronics – reused/recycled
- Art from scrap metal, sweaters, broken dishes
- Furniture repair
- Pallets – refurbished and chipped for mulch
- Tools
- Billboards – purses
- Architectural salvage
- Clothing – reused/textiles recycled
- Yellow grease – biofuels
- Manure - plant pots
- Asphalt Roofing Shingles
- Mattresses – soon?

HAPPENING IN CONNECTICUT
POTENTIAL IN CONNECTICUT

- Carpet, pads, rugs
- Processed asphalt roofing shingles
- Plastic, Plastic, Plastic
  - Child Safety Seats
  - Agricultural Plastic
  - Bottles
  - Tubs, Buckets
  - Vinyl siding
- Gypsum wallboard
  - New construction
  - Decon/Demo
- Glass cullet
  - Asstd Colors
  - Mixed
- Wood & Lumber
- Furniture, HH goods

- Single-paned windows
- Doors, doors, doors
- Scrap metals
- Bicycles
- Cardboard
- Textiles
  - Clothing for reuse
  - Textiles for recycling, repurposing
- Mixed paper
- High grade white paper?
  - ?
  - ?
  - ?
  - ?