Recycling: A Sector of Solid Waste Management

Emily Smith
Heather Strachan
Katrina Stoll
Evija Smite
Kevin Wolfe
What is Recycling?

“Recycling is a series of activities that includes collecting recyclable materials that would otherwise be considered waste, sorting and processing recyclables into raw materials such as fibers, and manufacturing raw materials into new products.”
Benefits

- Conserves Resources
- Prevents emissions of greenhouse gasses & water pollutants
- Saves energy
- Supplies valuable raw materials to industry
- Saves tax-payer dollars
- Creates jobs
- Stimulates development of greener technologies
- Reduces the need for new landfills and incinerators
Timeline...

1965 – Solid Waste Disposal Act (SWDA). Start of recycling policy


Timeline cont’d…

Early 1990s – EPA promotes Integrates Solid Waste Management (ISWM). Minimizes initial generation of waste through source reduction, re-using and recycling.

1992 – Tompkins County begins Solid Waste Management Program and decides to build plant at 122 Commercial Ave.
Federal

- National policy for resource conservation and recovery
- National goal – recycling rate 35% by 2005
- Financial assistance for state and local governments
- Standard methodology
- Voluntary partnership programs
State

- Regulations, standards, guidelines
  (NYS Solid Waste Management Plan)
- Economic incentives (Returnable Container Act)
- Funding for local waste reduction and recycling programs
- Compilation of Information (The NYS Recycling Bulletin)
Waste disposal and recycling from 1987 through 1998

Chart from: http://www.dec.state.ny.us/website/dshm/redrecy/bulletin99.pdf
Recycling Rates from 1987 to 1998

FIGURE 2
PERCENT OF NYS WASTE STREAM RECOVERED FOR RECYCLING

Chart from: http://www.dec.state.ny.us/website/dshm/redrecy/bulletin99.pdf
The Nuts and Bolts

• Mandatory (state)
  – Law for entire county
  – Glass, Paper, Aluminum

• Curb Side Pick up (community)
  – Solid Waste Annual Fee
  – Participation of Residents

• Trash Tags (market)
  – “Pay as you throw”
  – Economic Incentive

*It takes all 3 of these together to make it work*
## Tompkins County Recycling
### Data for 1998

<table>
<thead>
<tr>
<th>Recyclable Item (Mandatory)</th>
<th>Tons Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass (clear, green, and brown)</td>
<td>761</td>
</tr>
<tr>
<td>Paper (newspapers and high-grade)</td>
<td>9984</td>
</tr>
<tr>
<td>Metal (non-ferrous Aluminum, and ferrous)</td>
<td>22478</td>
</tr>
</tbody>
</table>
The Recycling and Solid Waste Center – 122 Commercial Ave.
Ithaca, NY
Ithaca as a complex community

- Ithaca is NOT homogenous
  - There are three college campuses
  - There is a mix between rural and semi-urban throughout
Recycling Versus Garbage in Tompkins County

Tonnage

0 5000 10000 15000 20000 25000 30000

Year

Tonnage

Recyclable Materials
Municipal Solid Waste

Information From: http://www.co.tompkins.ny.us/solidwaste/recyctns.html
Local Recycling Problems and Solutions

- College Students
- Biweekly recycling
- Not everyone is recycling
- Illegal Dumping
- Recycling is inconsistent Nation Wide
Local Recycling Highlights

• Trash Tag Program
  – Incentive to increase recycling and reduce trash

• Overall the program is successful and continues to desire improvement
Zero-Waste

- This is the ultimate goal that can be achieved through community involvement.
Zero Waste

- Nature as a model
- Integrated focus
- Sustainable production and consumption
- Systemwide approach
  - raw material supply
  - product packaging
  - sales and distribution
  - consumption
  - end-of-life management
Extended Producer Responsibility

- Problems with current system
- Reassign responsibility for waste back onto manufacturers
- From creation through post-consumer stage
- ex: Producer take-back systems

--> Missing link between design and recycling
Role of Governments

- Problems with current system
- Create a more level playing field
  - tax incentives
  - purchasing power
- Resource-conserving business must outcompete resource-wasting business
- No current federal legislation
“The Zero Waste vision is all about building strong communities and local economies”

Through state, market, and community approaches