Solid Waste Management Issues
Environmental Review Commission
January 24, 2006

Paul Crissman
Solid Waste Section
Note these two trees

Clay County, 1988
Municipal Solid Waste Flow FY 1990-1991
Solid Waste Management Act of 1989

Established:

- Reporting requirements
- Planning requirements
- Landfill bans
- New programs
- Set goals and policies
State lined landfill requirements (the 98 rule)

Federal Sub-title D Landfill requirements (RCRA)
STATUS OF MSWLFS IN NORTH CAROLINA

YEARLY COUNTS OF MSWLFS:
- UNLINED MSWLFS: 130, 122, 122, 112, 49, 47, 43, 39, 0
- LINED MSWLFS: 3, 6, 6, 6, 19, 21, 22, 23, 35, 39, 40, 40, 40, 40, 41, 40

SUB 'D' EFFECTIVE:
- 10/9/93

YEARLY COUNTS:
- 1990: 130
- 1991: 122
- 1992: 122
- 1993: 112
- 1994: 49
- 1995: 47
- 1996: 43
- 1997: 39
- 1998: 35
- 1999: 39
- 2000: 40
- 2001: 40
- 2002: 40
- 2003: 40
- 2004: 41
- 2005: 40

DENR/DWM/SWS
2/3/2006
Consequences of Increased Landfill Requirements:

- Private sector landfills
- Waste imports/exports
- New and different facilities
- Tipping fees
Municipal Solid Waste Flow Fiscal Year 2000-2001
Primary MSW Landfill Used by NC Counties

Primary = >50% of Tonnage

- BFI - Charlotte
- Hanes Mill
- Uwharrie
- CRSWMA
- Out of State
- W-Sampson
- East Carolina
- Single County
- MSW Landfill
- Foothills
- Upper Piedmont

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2/3/2006
Solid Waste Disposed of by North Carolina on Per Capita Basis

Fiscal Year

Tons/Person

DENR/DWM/SWS 2/3/2006
North Carolina Landfill Capacity

Remaining Total Capacity for Tons of Waste

- 19,000,000
- Tons of Waste to be Placed in Landfill
North Carolina Landfill Capacity

Remaining Total Capacity in Years

- Green: 48 Years
- Red: Using FY 2003-04 Tonnage
- Light Green: Using Lifetime Average Tonnage
Net Imports/Exports of Solid Waste in North Carolina

<table>
<thead>
<tr>
<th>Year</th>
<th>Imports (tons)</th>
<th>Exports (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 95-96</td>
<td>88,982</td>
<td>111,097</td>
</tr>
<tr>
<td>FY 96-97</td>
<td>103,510</td>
<td>280,400</td>
</tr>
<tr>
<td>FY 97-98</td>
<td>87,393</td>
<td>629,415</td>
</tr>
<tr>
<td>FY 98-99</td>
<td>74,185</td>
<td>1,166,875</td>
</tr>
<tr>
<td>FY 99-00</td>
<td>41,840</td>
<td>1,106,897</td>
</tr>
<tr>
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<td>21,614</td>
<td>900,743</td>
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<td>FY 01-02</td>
<td>117,981</td>
<td>882,247</td>
</tr>
<tr>
<td>FY 02-03</td>
<td>133,145</td>
<td>971,286</td>
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<td>FY 03-04</td>
<td>108,803</td>
<td>1,048,111</td>
</tr>
<tr>
<td>FY 04-05</td>
<td>119,202</td>
<td>1,161,926</td>
</tr>
</tbody>
</table>
## Total Landfill Capacity for North Carolina

### County:

<table>
<thead>
<tr>
<th>Date</th>
<th>Opened</th>
<th>Surveyed</th>
<th>Months Open</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Varied</td>
<td>9/21/2005</td>
<td>9.2</td>
</tr>
</tbody>
</table>

### Total Tons Disposed

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Avg. Per Year</th>
<th>2004-2005</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>59,549,524.6</td>
<td>6,479,185.5</td>
<td>7,673,315.7</td>
</tr>
</tbody>
</table>

### Volume Airspace (yd³)

<table>
<thead>
<tr>
<th></th>
<th>Used</th>
<th>Permitted</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>99,333,552.9</td>
<td>137,211,772.0</td>
<td>350,186,543.0</td>
</tr>
</tbody>
</table>

### Remaining Airspace (yd³)

<table>
<thead>
<tr>
<th></th>
<th>Remaining</th>
<th>250,852,990.1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Airspace</td>
<td></td>
</tr>
<tr>
<td></td>
<td>37,878,219.1</td>
<td></td>
</tr>
</tbody>
</table>

### Utilization Factor (tons/yd³):

<table>
<thead>
<tr>
<th></th>
<th>0.60</th>
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</table>

### Remaining Capacity for Tons of Waste

<table>
<thead>
<tr>
<th></th>
<th>Permitted</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>22,707,633.8</td>
<td>150,383,929.2</td>
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### Remaining Capacity in Years (Avg. TPY)

<table>
<thead>
<tr>
<th></th>
<th>3.5</th>
<th>23.2</th>
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### Remaining Capacity in Years (2004-2005 TPY)

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<tr>
<th></th>
<th>3.0</th>
<th>19.6</th>
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North Carolina Solid Waste Disposal Forecast

Tons Disposed/Population

Fiscal Year

DENR/DWM/SWS
2/3/2006
North Carolina Solid Waste Disposal Forecast

Fiscal Year

Tons Disposed
Population
Linear (Tons Disposed)
Linear (Population)

DENR/DWM/SWS
2/3/2006
North Carolina Solid Waste Disposal Forecast

- Tons Disposed
- Population
- Linear (Tons Disposed)
- Linear (Population)

Fiscal Year

DENR/DWM/SWS
2/3/2006
• Camden County - Black Bear- MSW
  3.5 million tons/year, source- east coast

• Columbus County - Riegel Ridge- MSW
  .5 million tons/year, source - 100 mile radius

• Brunswick County - Hugo Neu-
  industrial process waste landfill
  2 million tons/year, source - national and international

• Hyde County- Alligator River Recycling
  construction and demolition waste, barge facility
  .9 million tons/year, source - east coast
North Carolina Landfill Capacity

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<td>Potential</td>
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<td>971,286</td>
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DENR/DWM/SWS
2/3/2006
Solid Waste in North Carolina

The future:

More of the same
(Probably continue to have more and more waste)

Yet very different
(Probably become one of the nation’s leading importers of waste)
Options

Do Nothing

Institute a tipping fee

Ban certain materials (i.e., clean wood, cardboard)

Institute advance disposal fees (i.e., electronics)

Require program activity (i.e., recovery targets)
Five Goals Identified in the State Planning Process

- By 2010, **improve landfill technology** to secure long term protection of the environment.

- By 2010, a **larger portion** of solid waste will be managed by **recycling and composting** than disposal in landfills.

- By 2010, **litter and illegal disposal shall be reduced** by 50% from 2000-2001 levels.

- By 2010, implement a **public participation** and public education program for new proposed solid waste management facilities, and existing and closed solid waste management facilities.

- By 2010 the State of North Carolina will have **adequate capacity** to manage solid waste that requires landfill disposal.