Finding Sustainable Funding Sources for State Regulatory Programs in a Time of Market Shift

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Director of Applied Research
SWANA
Plenary Session

- Will explore options and new sources of funding for State programs
  - Many states rely on per ton fees collected on waste disposed at landfills
  - Downward trend in revenues
- Short presentation
- Facilitated discussion
• Trade Association for Solid Waste Managers and Related Professionals
• 7,800 members in U.S. and Canada
• Eight Technical Divisions (Recycling; Disposal; Waste-to-Energy etc.)
• Eight Certification Programs for SW Managers
• Manager of Landfill Operations (MOLO) – recognized by many States
SWANA Applied Research Foundation

- Founded in 2001 to conduct applied research on collectively-defined and funded projects of interest to members
- 37 Local Government and Corporate Subscribers
- Funded by “Penny Per Ton” contributions
- Four Research Groups – WTE, Disposal, Recycling and Collection
# The SWANA Applied Research Foundation – FY2012 Subscribers

## The SWANA ARF FY2012 Disposal Group

<table>
<thead>
<tr>
<th>Berkeley County (SC) Water and Sanitation Authority</th>
<th>Metro Waste Authority (Des Moines, IA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDM</td>
<td>Mecklenburg County, NC</td>
</tr>
<tr>
<td>Chester County (PA) Solid Waste Authority</td>
<td>New River (FL) Solid Waste Association</td>
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<tr>
<td>Delaware Solid Waste Authority</td>
<td>Solid Waste Authority of Central Ohio</td>
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<tr>
<td>Denton, TX</td>
<td>Solid Waste Authority of Palm Beach County</td>
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<tr>
<td>Delaware County (PA) Solid Waste Authority</td>
<td>SCS Engineers</td>
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<tr>
<td>King County, WA</td>
<td>Three Rivers (SC) Solid Waste Authority</td>
</tr>
<tr>
<td>Lancaster County (PA) Solid Waste Mgmt. Authority</td>
<td>Waste Commission of Scott County, IA</td>
</tr>
<tr>
<td>Los Angeles County Sanitation Districts</td>
<td>Winston-Salem, NC</td>
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## SWANA Applied Research Foundation - FY2012 Recycling Group Subscribers

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Representative</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edmonton, Alberta, Canada</td>
<td>Dr. Christian Felske, PEng</td>
<td>Technical Specialist - Waste Management Branch</td>
</tr>
<tr>
<td>Fairfax County, Virginia</td>
<td>Pamela Gratton</td>
<td>Chief, Recycling and Administrative Services</td>
</tr>
<tr>
<td>North Vancouver, British Columbia, Canada</td>
<td>Allen Lynch</td>
<td>Manager – Waste Reduction</td>
</tr>
<tr>
<td>Solid Waste Agency of Northern Cook County, Illinois</td>
<td>Steve Schilling</td>
<td>Assistant Executive Director</td>
</tr>
<tr>
<td>Monterey CA Regional Waste Management District</td>
<td>Tim Flanagan</td>
<td>Assistant General Manager</td>
</tr>
</tbody>
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Overview of Presentation

- Unsustainability of Historical Funding Approaches
- Sustainable Funding Approaches
- Landfills and Economic Development
- Discussion
Recycling Doesn’t Pay For Itself

<table>
<thead>
<tr>
<th>Service Element</th>
<th>Service Cost ($/HH/Mo)</th>
<th>Recyclables Collected (Lbs/HH/Mo)</th>
<th>Service Costs ($/Ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection</td>
<td>$2.00</td>
<td>40</td>
<td>$100</td>
</tr>
<tr>
<td>Processing</td>
<td></td>
<td></td>
<td>$50-$100</td>
</tr>
<tr>
<td>Revenues</td>
<td></td>
<td></td>
<td>$50-$100</td>
</tr>
<tr>
<td>Net Cost</td>
<td>$2.00</td>
<td></td>
<td>$100</td>
</tr>
</tbody>
</table>
Traditional (Unsustainable) Funding Approaches

- Landfill Tipping Fees
- “Pay As You Throw” (PAYT)
  - Recyclables collection service provided free of charge
  - Customers only charged for waste collection
  - Promoted by US EPA; State Governments (?)
- State Grants
"The refuse fund has been a cash cow for the city and it can be again... One problem in its structure is that it taxes the devil (garbage) to finance the angels (recycling). In that case, the angels don't have sustainable financing without the devils, so if the angels do a really good job, you need more devils. That's a bad position to be in. The angels need their own self-sustaining financing."

Why Landfill Tipping Fees Are Not Sustainable Funding Sources

- Lower Disposal Tonnages
  - Economic recession
  - Effectiveness of waste diversion/recycling programs
- Disappearance of tipping fee differential
Lower Disposal Tonnages

- Economic Recession
  - MSW – down by 10%
  - C&D – down by 20% or more

- Recycling Program Effectiveness
  - Typically 10-20% diversion for residential waste
  - San Francisco (Zero Waste) – 50% diversion

- Lower Tonnages = Lower Revenues
Disappearance of Tipping Fee Differential

- Tipping Fee Differential
  - Difference between Tipping Fees and Disposal Costs
  - Used To Pay For Recycling Program Costs
- Only Available at Publicly-Owned Landfills
- Impacted by Trend Toward Regional Private Landfills
Reasons For MSW Landfill Regionalization

- Encouragement by Federal and State Governments
  - Fewer landfills to site and permit
  - Fewer landfills to monitor and inspect

- Economies of Scale

Figure 2-2
MSW Landfills - Economies of Scale
Regional Landfills Encouraged By Federal Government

- “US EPA has stated the intent of Subtitle D is to promote regionalization by closing small facilities, which cannot afford to comply with location, design, operating, and closure and post closure requirements of the federal regulations.”
Trend Toward Regional Landfills

Number of Operating MSW Landfills in U.S.

- 1988: 7,924
- 1989: 7,379
- 1990: 6,326
- 1991: 5,812
- 1992: 5,386
- 1993: 4,482
- 1994: 3,558
- 1995: 3,197
- 1996: 3,091
- 1997: 2,514
- 1998: 2,314
- 1999: 1,967
- 2000: 1,858
- 2001: 1,767
- 2002: 1,711
- 2003: 1,654
- 2004: 1,858
Trend Toward Regional Landfills

- No. of MSW landfills in U.S. decreased from 7,924 in 1988 to 1,654 in 2004 (almost 80% reduction)

- Disposal capacity has remained constant
  - 8.7 billion tons remaining permitted capacity in 2004
  - This represents about 35 years of disposal capacity at today’s disposal rate (248 million tons per year).
Trend Toward Regional Privately-Owned MSW Landfills

Privately-Owned Landfill Capacity in the U.S. in 2004

<table>
<thead>
<tr>
<th>Company</th>
<th>No. MSW Landfills</th>
<th>Permitted Landfill Capacity (Tons)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Management, Inc.</td>
<td>237</td>
<td>2,943,700,000</td>
<td>34%</td>
</tr>
<tr>
<td>Allied Waste Industries Inc.</td>
<td>166</td>
<td>1,996,000,000</td>
<td>23%</td>
</tr>
<tr>
<td>Republic Services Inc</td>
<td>58</td>
<td>1,147,200,000</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Subtotal - &quot;Big Three&quot;</strong></td>
<td><strong>461</strong></td>
<td><strong>6,086,900,000</strong></td>
<td><strong>70%</strong></td>
</tr>
</tbody>
</table>

| Subtotal - Private Landfills       | 562               | 6,755,876,000                     | 78%     |
| Other Public MSW Landfills        | 1,092             | 1,939,724,000                     | 22%     |
| **Total MSW Landfills**           | **1,654**         | **8,695,600,000**                 | **100%** |
Regional Private Landfill Trend - Drawbacks

- There is no longer a tipping fee differential for many communities.
- Differential is now used to pay for transfer/haul costs and corporate profits.
- Local Governments Can No Longer Use Tipping Fee Differential To Subsidize Recycling Program Costs.
Sustainable Funding Approaches For Local Governments

- **Taxes**
- **Fees**
  - Service Fees
  - Impact Fees
  - Availability Fees
- **Service Cost Reductions**
  - Reduce level of service
  - Introduce competition into service market
Solid Waste Collection Taxes

- **State of Washington**
  - Requires solid waste collection companies to charge taxes
  - Revenues go to State’s Public Works Assistance Account

- **State of Minnesota**
  - Also requires solid waste collection companies to charge taxes
  - Revenues ($48.2 M) go to State’s Solid Waste Fund (70%) and General Fund
Litter Taxes

- **State of Virginia**
  - Litter tax on consumer products businesses
  - Revenues fund litter prevention and recycling grants

- **State of Washington**
  - Litter tax on industries that sell, manufacture or distribute consumer products
  - 30% of revenues fund waste reduction and recycling programs
Service Fees – North Carolina

- **Permit Application Fees**
  - MSW Landfill (>100k tons/yr) - $50,000
  - MSW Landfill (<100k tons/yr) - $25,000

- **Annual Permit Fees**
  - MSW Landfill - $3,500
  - C&D Landfill - $2,750.
One Way To Increase State Tax Revenues

- Each State assumes responsibility for the disposal of its own wastes
  - Waste generators assume responsibility for waste disposal
  - Only way for State recycling/diversion goals to make sense
Economic Development
Benefits of In-State Disposal

- SW disposal is a multi-billion dollar per year business
- Create jobs
- Keep disposal $$ in state
- Provides control over future pricing

Clark County Waste to Energy Enterprise (250 TPD)
- County Benefits
  - Creation of 35 New Jobs
  - Annual Employee Compensation -$1.5 M
  - Employee Compensation 25 years -$51.6M
  - Revenue Infusion into County, City, and Schools

- Region Benefits
  - Reduce Disposal Costs
    - Diversion of All Waste Types MSW, Tires, Sewer Sludge, Electronic Waste
  - Reduce or eliminate land filling of waste
  - 25 Year Economic Benefits to Region $975.7M
  - Over 25 Years indirect job Creation –162 jobs
In-State Publicly-Controlled Regional Landfills

- Developed to provide economic development benefits to communities in the state
- Brings back tipping fee differential
- Provides local governments with control over
  - Future capacity
  - Future pricing
- Provides State/Local Governments with control over
  - Long-term care/future use
  - Future remediation risks
What State Governments Can Do

- Promote In-State Landfills for use by Regional Local Government Disposal Cooperatives
  - Local governments procure long term disposal capacity at contracted prices
  - Landfills owned and operated by public and/or private entities

- State Economic Development Programs
  - Economic Development Assistance to Regional Landfills
  - Siting Assistance
  - Ownership? (e.g., Delaware Solid Waste Authority)
Facilitated Discussion