Federation of New York Solid Waste Associations

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Northeast Tipping Fees presented by:

Chris Campman Manager Solid Waste Gannett Fleming, Inc.

This paper and presentation discuss the impact of tipping fees and solid waste capacity in the Mid-Atlantic and northeast regions. As state and local governments implement additional controls on solid waste facilities, potential volume issues loom on the horizon.

Local, state and federal regulations have impacted all solid waste facilities. Restrictions due to local host community benefits and concerns have impacted both tipping fees and daily capacities at the sites. Various state agencies have made attempts to exert pressure to restrict facility capacity through expansion and permit renewal reviews.

State Government/Waste Capacity

The Mid-Atlantic States have been working together (love/hate) in the recent past to develop a balanced approach for the management of solid waste in the region. This approach hopes to integrate environmentally sound waste disposal including landfills, waste-to-energy, recycling, re-use, and composting initiatives. This approach has a long road to go.

The nation continues to increase the amount of solid waste generated for disposal. In 1998 the nation generated approximately 340 million tons of municipal solid waste, an increase of over 36% from the decade before. This increase was due to many factors such as a robust economy, package modification, and increases in population.

During this time period the climate for disposal changed. More stringent regulations and requirements for solid waste facilities were enacted. This caused a decrease in the number and availability of waste disposal sites, all while an increase in material requiring disposal occurred. This has caused a major shift in waste markets and the industry itself.

Our robust economy caused the consolidation of the private side of the waste industry, which spilled over in the public side. As private companies internalize disposal options, the number of transfer stations increases, and long haul transportation options expand. This causes an imbalance in disposal sites that accept the wastes of certain companies. Additionally, a geographic imbalance exists in certain part of the region, which tends to complicate the matter.

As the landfill disposal business moves into the next decade, operational changes will occur. After the wave of consolation in private industry the reality of increased debt payments and lower margins have forced the major companies to cut costs.

Tipping Fees

In the last ten to fifteen years tipping fees have fluctuated downward. The fluctuation of rates and services offered has driven the market from high margins and profits to survival through economies of scale to reduced services and staffing. Site capacity has again become the major trump card for survival.

Public operations have experienced a similar life cycle. Years ago the regulators in many states encouraged the development of waste disposal systems to solve environmental concerns. These systems had a captured market and included initiatives for recycling and re-use. Tipping fees were high but the services offered were numerous and environmentally sound. Challenges in the courts changed the face of solid waste collection and disposal as well as recycling and other services offered.

Public operations had to compete with privates for the waste and a dual market developed. Many public operations continue today to struggle with traditional operations in the public setting versus the competitive market.

The larger private companies have the options to integrate their systems, which reduce cost, and with multiple disposal sites they can move waste to sites based on cost and volume capacity. Accounting measures and reporting regulations can provide firms with incentives that are not available to public operations.

Any discussion regarding tipping fees must be couched with the reality that pricing can fluctuate greatly at every site. Discounts for volume are routine as well as internal costs reductions. Every site has its own criteria to set pricing, which normally considers volume, market conditions and individual site conditions.

The graphics attached show the landfill average tipping fees for many states. The states of PA, OH and VA have a low end on the range, which explains why they import large volumes of waste. The top 10 import states provide a national trend in the northeast/Mid-Atlantic and in the Midwest.

LANDFILL AVERAGE TIPPING FEES

	AVERAGE TIPPING FEE	RANGE OF TIPPING FEES
NY	$55	$38-72
PA	$49	$12-68
NJ	$60	$48-98
OH	$30	$17-51
NH[A]	$66	$60-75
VT[B]	$70	$60-80
MA[C]	N/A	N/A
DE	$58	---
MD	$48	$30-68
VA	$39	$22-53

SOURCES: A- NEW HAMPSHIRE SOLID WASTE MANAGEMENT BUREAU
B- VERMONT WASTE MANAGEMENT DIVISION, SOLID WASTE SECTION
C- MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WASTE PREVENTION
OTHERS: MID-ATLANTIC STATES MUNICIPAL WASTE MATRIX, MAY 1999.

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TOP 10 STATES IN SOLID WASTE IMPORTS

IMPORTS (IN ANNUAL TONS IN 1998)	
PENNSYLVANIA	9,808,261
VIRGINIA	4,663,797
INDIANA	2,871,225
MICHIGAN	1,728,501
ILLINOIS	1,507,526
WISCONSIN	1,216,363
OREGON	1,118,509
OHIO	1,089,649
NEW HAMPSHIRE	817,000
KANSAS	800,000

SOURCE: CONGRESSIONAL RESEARCH SERVICES, FEBRUARY 22, 2001

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The tipping fee issue will always be a topic of interest in maintaining services and profitability.

Capacity

The number of solid waste landfills has been declining since the EPA Sub-Title D requirements were enacted. The attached graphics show the number of landfills by state and public versus private. This number fluctuates annually.

REGIONAL AREA

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LANDFILLS IN REGION

	SOLID WASTE		CONSTRUCTION & DEMOLITION	
	PUBLICLY OWNED	PRIVATELY OWNED	PUBLICLY OWNED	PRIVATELY OWNED
NY	21	7	12	14
PA	11	40	1	6
NJ	11	1	0	2
OH	19	30	1	75
NH[A]	14		2	
VT[B]	3	2	0	1
MA[C]	12	11	0	0
DE	3	0	0	1
MD	20	1	4	7
VA	62	6	3	20

SOURCES:
A- NEW HAMPSHIRE SOLID WASTE MANAGEMENT BUREAU
B- VERMONT WASTE MANAGEMENT DIVISION, SOLID WASTE SECTION
C- MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WASTE PREVENTION
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Waste capacity is a major factor in the graphic versus the amount of waste generated. Again the amount of capacity available is focused in PA, OH and VA. These states also have the low end of the range on tipping fees. With the capacity focused in only a few states, a major concern is transportation of the waste from the large generation areas to the disposal site.

LANDFILL CAPACITY

	TOTAL WASTE GENERATED (MILLIONS OF TONS)	TOTAL PERMITTED DISPOSAL CAPACITY (MILLIONS OF TONS)
NY	30	57.6
PA	9.4	199
NJ	7.8	42
OH	12	279
NH[A]	1.3	N/A
VT[B]	0.36	2.7
MA[C]	N/A	N/A
DE	0.63	20
MD	6.5	N/A
VA	12	207

SOURCES:
A- NEW HAMPSHIRE SOLID WASTE MANAGEMENT BUREAU
B- VERMONT WASTE MANAGEMENT DIVISION, SOLID WASTE SECTION
C- MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WASTE PREVENTION
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Transfer stations provide the loading option that is preferred. Long haul of solid waste to PA, OH and VA is from the New York City area, northern New Jersey, and other large metro areas in the northeast. The graphic shows the number of transfer stations. The numbers are high in many states because of the number of small transfer stations in rural areas.

TRANSFER STATIONS AND PROCESSING FACILITIES

	TRANSFER STATION	MEDICAL INCINERATOR	COMPOSTING	OTHER
NY	200	15	78	323[D]
PA	73	2	8	10
NJ	52	15	175	95
OH	54	2	0	0
NH[A]	198	9	2	0
VT[B]	89	0	8	0
MA[C]	185	N/A	N/A	N/A
DE	10	0	0	0
MD	12	4	0	11
VA	53	1	12	0

SOURCES:
A- NEW HAMPSHIRE SOLID WASTE MANAGEMENT BUREAU
B- VERMONT WASTE MANAGEMENT DIVISION, SOLID WASTE SECTION
C- MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WASTE PREVENTION
OTHERS: MID-ATLANTIC STATES MUNICIPAL WASTE MATRIX, MAY 1999.
D- INCLUDES SMALL RECYCLING TRANSFER STATIONS

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WASTE-TO-ENERGY FACILITIES

	NUMBER OF FACILITIES	
	PUBLICLY OWNED	PRIVATELY OWNED
NY	10	0
PA	5	1
NJ	1	4
OH	0	0
NH[A]	2	
VT[B]	0	0
MA[C]	0	7
DE	0	0
MD	2	2
VA	3	1

SOURCES:
A- NEW HAMPSHIRE SOLID WASTE MANAGEMENT BUREAU
B- VERMONT WASTE MANAGEMENT DIVISION, SOLID WASTE SECTION
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The impact of changing regulations and states giving citizens and host communities a much stronger voice in the permitting and operation of the sites has increased the permitting time line and increased operational costs. New, more stringent requirements are being thrust upon the sites.

Host community agreements with the landfill are required in many states before the site can receive a permit to operate. The registration of trucks and traffic flow patterns are additional methods to control waste flows. Harm-versus-benefits analysis and public hearings are also required.

The combination of new state and local controls, which benefit the environment, have begun to slow down the pipeline of new facilities, permit renewals and available capacity. States are also imposing statewide volume caps regardless of individual site capacity issues.

Future

- New Greenfield landfill sites?
- So what's going to happen with tipping fees up down or level?
- Capacity to remain status quo or increase/decrease?
- Private consolidation renewed?
- Public operations continue to privatize?
- Recycling and re-use to increase/decrease?
- Waste-to-energy increase in plants?

What will happen is uncertain, but change is inevitable.

The number of landfills should remain relativity constant. The number of Greenfield sites in the mill has not been increasing. Therefore, the existing landfills will increase in value based on capacity and transportation availability. This should have a direct relation to an increase in tipping fees. Depending upon the areas within the region, individual sites will still have tipping fee and capacity concerns.

With capacity such an issue, methods to improve compaction or density have become a priority. Improved heavy equipment utilization, equipment for compaction only, GIS systems and changes to wheels and blades have vastly improved compaction rates. Mixing various types of waste material on the operating face has increased compaction. The use of alternative daily cover materials has reduced the volume consumed by traditional cover soils. The use of improved technologies such as leachate re-circulation and bio-reactor technologies (aerobic and anaerobic) have shown dramatic increases in settlement. All of these improvements will produce an increase in volume, which means increased revenue from the same landfill footprint.

Conclusions

- Tipping fee increases are needed in the market to cover operations including labor, fuel and equipment costs.
- Tipping fees will increase due to volume constraints
- Tipping fees will increase due to state and local regulation tightening
- Regional imbalance regarding disposal sites will continue.