

# **Hamilton County Solid Waste Management District**

## **Staff Report: Expansion of Rumpke Sanitary Landfill**

### Introduction and Summary

Rumpke Consolidated Companies, Inc. submitted an application to Colerain Township on March 6, 2006 for a 291 acre expansion at the Rumpke Sanitary Landfill (RSL). This expansion would almost double the size of RSL, providing an additional 30 years of disposal capacity. RSL's current capacity is less than 18 years.

The purpose of this report is to provide the Policy Committee with objective information to evaluate the impact of the landfill expansion on District operations and its stakeholders (businesses and residents of Hamilton County). It is understood that various stakeholders may have additional information that the Committee may find useful when discussing this issue.

There are several issues surrounding local landfill expansion such as quality of life issues, impact on property values, and positive and negative economic impacts. Although each of these issues could be its own analysis paper, the intent of this report is to address the effects of the proposed expansion on District operations and stakeholders. In particular, the impact on District operations, disposal capacity for Hamilton County's waste, and costs to District stakeholders will be examined.

### Background

HB 592 was passed in 1988 as a means of updating Ohio's solid waste system and to provide a comprehensive set of solid waste laws for the State. As part of that law, counties, or groups of counties, were required to form solid waste management districts in order to implement solid waste plans. The mission of the District is to meet state-mandated recycling goals and ensure adequate disposal capacity for the District's waste. According to Ohio Revised Code Section 3734.53 (C) states:

*The plan shall provide for, demonstrate, and certify the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the district...*

### Impact on District Operations if RSL Closes

Based upon past waste flows, RSL typically accepts 1.9 million tons of waste annually from the region. As the District is funded through landfill tipping fees at \$1-\$2-\$1 fee structure, this translates into approximately \$2.7 million/year in annual revenue. These funds are used to provide programming as outlined in the District's solid waste management plan.

The District has maintained this revenue structure for the past fifteen years. Tipping fees collected at RSL provide the District with adequate revenue for its programming,

however, tipping fees are not the only funding options available to solid waste management districts. If RSL closes, the District will need to implement another funding source such as a generation fee or designation fee.

One alternative funding structure is a generation fee which allows solid waste districts to collect revenue on waste generated in Hamilton County, as opposed to waste disposed in the County. Generation fees are the most common way of funding solid waste district programs in the absence of an in-District landfill. A generation fee is applied to the first facility where the waste is disposed. Generation fees may only be applied to solid waste that is disposed within the State of Ohio. As of 2005, twenty-six solid waste districts in Ohio have a generation fee. Those fees range from \$.50/ton up to \$9.00/ton.

The main difference between a disposal fee and a generation fee is the issue of who ultimately pays for District programs. Currently, Hamilton County's solid waste programs are financed largely through other counties in Ohio (these Ohio counties pay \$2/ton in District fees for waste disposed at RSL). These counties contribute approximately \$1.6 million of the District's annual \$2.7 million in revenues. Under a generation fee, the District would not receive revenue from other Ohio counties; therefore, the District would have to finance the County's entire solid waste management plan through Hamilton County residents and businesses.

To maintain the current level of District programming, Hamilton County generators would have to pay approximately \$2.40/ton as opposed to \$1.00/ton currently being paid. For example, the City of Cincinnati currently pays approximately \$117,000.00/year in District fees. Under a generation fee of \$2.40/ton, Cincinnati's fees would increase to \$280,800.00/year.

Other revenue sources include designation fees, similar to Van Wert County. Under this revenue source, any landfill that wants to receive a county's waste must sign a contract agreeing to remit fees to the solid waste management district. This type of fee structure would allow the District to collect fees on all District-generated waste that is disposed within Ohio and outside Ohio. In the Van Wert County example, those facilities that signed the contract pay \$5.30/ton (generally fees are higher in rural counties). To maintain the current level of District programming, the designation fee would be approximately \$2.11/ton.

If RSL is not granted its current expansion plan, the District would address the change in fee structure in the solid waste plan update in 2021. At that time, the type of alternative funding structure and the fee attached to that funding structure would be determined.

Because the District has ample time to plan for the potential closure of RSL, loss of the current disposal fee mechanism should not impact District revenues as an alternative funding source will be developed during a future solid waste management plan update process. It is important to note that Hamilton County political jurisdictions are required to approve all solid waste management plan updates, including an increase in District fees.

## Disposal Capacity

As required by the Ohio Revised Code, solid waste management districts must demonstrate adequate disposal capacity throughout the life of the 15-year solid waste management plan. In the Plan Update, there is adequate disposal capacity through 2021.

In reviewing the District's capacity analysis in the Plan Update, the total disposal capacity within 200 miles, including pending capacity, is 186,107,590 tons, based on annual waste receipts of 5,343,300 tons (pending disposal capacity analysis is included as Appendix A). This tonnage equates to 34 years of capacity (if all pending capacity becomes available).

If RSL closes in the next 18 years, the flow of solid waste in Hamilton County and the region would be impacted. Closure of the landfill will necessitate the annual diversion of approximately 1.9 million tons of solid waste to other disposal sites each year. Approximately 1 million tons of the waste disposed at RSL originates from Hamilton County generators. In 2004, 80 percent of Hamilton County's waste was disposed at RSL.

Because District waste will be transported to disposal facilities outside the region if RSL closes, the question becomes what is the cost associated with the transportation of waste to other regions?

In order to transport waste out of the region, there will be a need for additional transfer stations. Transfer stations make for more efficient hauling when the direct-haul distance is greater than 20-30 miles. Below this range, it typically makes more sense to direct-haul the waste to landfill if that option is available. In other words, for hauling waste long distances, which would be required if RSL closes, consolidation and transfer may be a more efficient option than attempting to travel those increased distances using individual packer trucks. Transfer stations provide an effective means of consolidating garbage at one point, bulking it, and shipping it to more distant disposal facilities.

In the absence of a local landfill, multiple transfer stations may be needed to service an area the size of Hamilton County. This implies that multiple communities may be affected when a community relies solely on transfer hauling.

## Costs Associated with Transfer Stations

The cost to operate a transfer station and the subsequent hauling of waste ranges between \$8 - \$17 per ton. These figures provide a relative indication of the increased costs associated with transfer hauling. This range is highly dependent upon the scale of the facility, the capital costs and technology employed, distance to disposal site, etc. More specifically, transfer and subsequent hauling to a landfill approximately 30 miles away would result in additional costs of approximately \$10.00 per ton. A landfill 100 miles away might be expected to add costs of up to \$17.00 per ton. It should be noted that how this cost translates to pricing, for private sector facilities, is dependent upon several

factors including company strategy, the competitive environment, etc. It should also be noted that the above analysis does not acknowledge the fact that exported waste may be subject to additional disposal fees from other counties.

Assuming the average household produces approximately 1.5 tons of refuse per year, and assuming transfer costs described above (\$10 - \$17 per ton), this would equate to an increase of approximately \$1.25 - \$2.13 per household per month for residential generators (See Appendix B for the derivation of these rates and for an analysis of the impact of these costs to a typical Hamilton County community). These estimates are dependent upon the local competitive environment, as well as, on the nature of the individual transfer facilities operating in the County. In addition, it must be noted that higher transportation costs may, in certain cases, lead to cost savings if they allow the County to access more distant, yet less expensive, disposal options.

### Summary

One of the main responsibilities for solid waste management districts is to ensure adequate disposal capacity for our stakeholders. Currently, there is adequate disposal capacity through the next fifteen years. Additionally, given the pending disposal capacity of facilities within a 200 mile radius, there is thirty-four years of capacity for Hamilton County's waste.

Without the presence of a local landfill, additional transfer stations may be needed in order to transport waste to those facilities. As detailed in this report, there may also be an additional cost for waste disposal between \$8 - \$17/ton.

Although the District currently relies on landfill tipping fees as the sole revenue source, these fees are not the only revenue source for funding solid waste management districts. Given the potential for the closure of RSL in 18 years, the District will need to examine other funding sources such as a generation fee or designation fee in order to continue to provide recycling and waste reduction programs to our stakeholders. Either fee will necessitate an increase over the District's current fee structure. The change in fee structure will be addressed in a future solid waste management plan update.

## Appendix A - Pending Disposal Capacity in the Wasteshed

Name of Facility	Planned Future Capacity (Tons)	Timeframe for Future Capacity
Rumpke Sanitary Landfill, Inc.	30,160,000	Currently waiting for final permit from Ohio EPA. A decision should be announced by October, 2004. <b>Approved.</b>
Bond Road Landfill	0	
Pine Grove Regional Facility	0	
Stony Hollow Landfill	75,000	Plan to start development in 2004 or 2005. <b>Permit in process.</b>
Suburban Landfill, Inc.	0	
Brown County Landfill	24,952,800	Currently in the permitting process. <b>Permit submitted in February; currently under review.</b>
Cherokee Run Landfill, Inc.	18,750,000	Currently in the permitting process and plan to have the new cell operational by 2006. <b>Still in permit process.</b>
Medora Sanitary Landfill <sup>1</sup>	0	
Pendleton County Landfill	25,600,000	Plan to begin the development process in 2012 and have the new cell operational by 2013. <b>Beginning of the permit process.</b>
Epperson Waste Disposal	0	
Bavarian Trucking Company	16,250,000	The new capacity is currently under construction.
<b>Total</b>	<b>115,787,800</b>	

If all of this pending capacity becomes available, the total disposal capacity in the wasteshed increases to 186,107,590 tons and over 34 years of capacity is available if the annual disposal requirements remain at 5,343,300 tons.

<sup>1</sup> The Medora Solid Waste Disposal Facility does have plans for expansions. However, this additional capacity will only be available to generators within a 75-mile radius of the facility.

**Appendix B  
Sample Calculation  
Relating Cost Per Ton to Per Household Charge  
Average (Hypothetical) Hamilton County Political Subdivision**

# Households	7,100
Waste Produced/household	1.5 tons/year
Total Residential Waste Produced/Year	10,650
Current Rate for Refuse Collection/Disposal	\$7.25/hh/mo.
Dollars Per Ton (Collection and Disposal)	\$58
Dollars Per Ton With Transfer Costs Added	
Low	\$68
High	\$75
Dollars Spent on Residential Waste Collection Per Year	\$617,700
Dollars Spent on Residential Waste Collection Per Year With Transfer Costs (Low)	\$724,200
Dollars Spent on Residential Waste Collection Per Year With Transfer Costs (High)	\$798,750
Monthly Per Household Charge With Transfer (Low) \$724,200/12 months/7100 hhlds	\$8.50
Monthly Per Household Charge With Transfer (High) \$798,750/12 months/7100 hhlds	\$9.38
<b>Total Dollar Increase in Hypothetical Community's Cost of Waste Management</b>	<b>\$106,500 - 181,050/year</b>