

Solid Waste Management Cost and Operations Review



PRESENTED TO:
WINCHESTER MUNICIPAL UTILITIES
COMMISSION

FINAL REPORT
MARCH 07, 2013



Introduction

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New Market, Maryland
Orlando, Florida

- Management consulting firm specializing in the municipal waste management industry
 - Collection Optimization
 - Cost/Rate Analysis
 - Material Stream Analysis
 - Solid Waste and Recycling Planning
- National client base
- Prior work in Kentucky

Consultant's Role

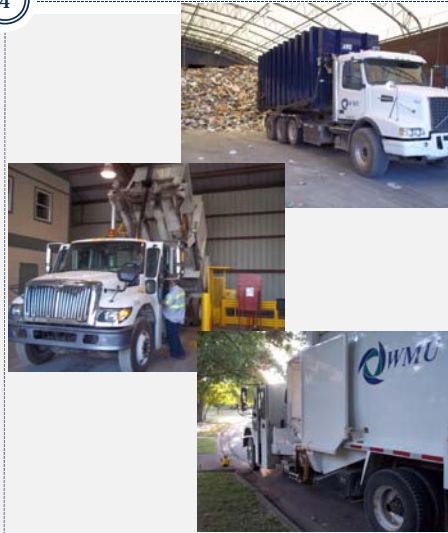
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- MSW Consultants was tasked with evaluating and reporting, to the best of its ability, factual information about WMU's solid waste system
- The findings herein are intended to inform WMU, elected officials and the public about options for rates and services going forward

Project Objective #1

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- Evaluate operating efficiency of collection system and transfer station



Project Objective #2

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- **Validate actual costs to provide service for all customer classes**
 - **Calculate rate structure**
- **Key Questions:**
- Should single family and multi-family dwellings be charged the same or different rates?
 - Should businesses be required to pay a minimum monthly fee if they do not receive any service?

Methodology

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- **Phase 1 – Operations Review**
 - Operational analysis
 - Benchmarking
 - Commercial Survey
 - Working Meeting
- **Phase 2 – Cost/Rate Analysis**
 - Working Meeting
- **Phase 3 – Reporting**
 - Analysis of Options
 - Commercial Survey
 - Draft Report
 - Working Meeting
 - Report
 - Presentation

Existing System Review

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- **Findings: WMU operational performance is satisfactory**
 - Collection productivity is at industry norms
 - Fleet condition is excellent
 - Fleet management costs are below average
 - Transfer Station in excellent condition
 - System has capacity to add customers

Benchmarking of Solid Waste Services

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Municipality	Population
Frankfort, KY	25,500
Paducah, KY	25,000
Independence, KY	24,700
Madisonville, KY	19,600
Winchester, KY	18,400
Murray, KY	17,700
Danville, KY	16,200

- Benchmarking also included six nationally recognized municipalities known for their high diversion rate

Benchmarking Findings

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- Every system is different!
- Among its Kentucky peers...
 - Winchester is the only one providing **twice weekly** refuse collection
 - Winchester is the only one providing commercial dumpster collection **in competition** with private haulers
 - Winchester is the only one providing **roll-off collection** service
 - Only Winchester and Murray do **not** provide universal curbside recycling collection
- In Kentucky, Frankfort has recently implemented volume-based (or “Pay-as-you-throw”, PAYT) collection

Benchmarking Conclusions

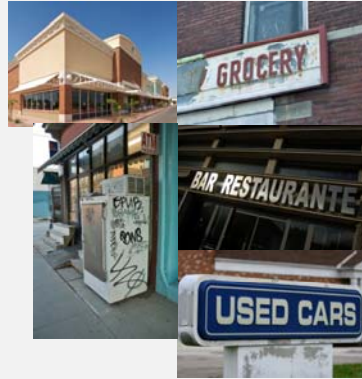
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- Winchester is in an ever-increasing minority by retaining twice weekly collection of refuse, with no comprehensive curbside recycling.
- Winchester has the administrative platform to establish PAYT rates.
- Education and outreach will be critical throughout any evolution of services.

Commercial Customer Survey

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- Survey transmitted to 194 businesses that do not currently get service from WMU
 - 15 percent response rate
- Findings
 - Customers generally satisfied with their provider
 - No respondents would pay more for “great customer service”
 - Market price for dumpster service is at or below WMU current rates
 - Opportunity for increased OCC recycling
 - WMU must actively monitor the market



Cost-of-Service and Rate Projections

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Financial Analysis Objectives

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1. Determine the full cost to provide each collection service

- “Full Cost” is defined to include all direct costs, plus
 - Vehicle and equipment replacement allowance
 - Allocated management and administrative
 - Allocated field operations
 - **Full Cost excludes other debt service requirements**

2. Determine a rate structure for WMU solid waste services

Current Rate Structure

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Service	Jan 1, 2011	Jan 1, 2012	Jan 1, 2013	Jan 1, 2014
Single-family and Multi-family Residential Rate (monthly)	\$21.73	\$25.79	\$30.61	\$32.14
Commercial Curbit Rate	\$34.95	\$34.95	\$34.95	\$34.95
Commercial No-Service Rate	\$34.95	\$34.95	\$34.95	\$34.95
Commercial Container Service (per pull)	\$24.25 - 28.50	\$24.25 - 28.50	\$24.75 - \$29.00	\$24.75 - \$29.00

- Residential rates increasing 48% from 2011 to 2014
- Small increase to commercial container rate in 2013

Current Revenue Path

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Service	CY2011	CY2012	CY2013	CY2014
Total Revenue	\$2,693,421	\$3,112,306	\$3,614,744	\$3,792,286

- **Total Solid Waste Revenue Increase 2011 to 2014 = 41%**

Current Cost and Revenue Path

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Financial Summary	CY2011	CY2012	CY2013	CY2014
Revenue Projections	\$2,693,421	\$3,112,306	\$3,614,744	\$3,792,286
Solid Waste Cost Projections	\$2,033,526	\$2,119,329	\$2,172,312	\$2,226,620
Net Surplus from Solid Waste	\$659,895	\$992,977	\$1,442,432	\$1,565,666



- **Solid Waste must contribute sufficient revenues to fund WMU debt service requirements (existing and future)**

Development of Solid Waste Service Rates

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Full Cost Rates

- The amount that WMU would charge if solid waste only had to recover its full costs

Revenue Sufficient Rates

- The amount WMU would charge in order to make sure Solid Waste contributes sufficient revenues, in combination with the water and wastewater utilities, to fund the full utility debt service requirements

Residential Customers

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- WMU is required by ordinance to provide solid waste collection service to single family and multi-family customers
- WMU can set revenue-sufficient rates on this customer class

Residential Rates (2013)

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Rate	Unit	Current Rate	Full Cost Rate	Revenue Sufficient Rate
Single Family Residential	\$/month	\$30.61	\$19.99	\$31.56
Multi-Family Residential	\$/month	\$30.61	\$14.35	\$22.66

- Single family and multi-family currently charged the same rate
- Rate evaluation suggests new multi-family rate class with lower rate per dwelling unit
- Full cost rate must increase 36 percent to achieve revenue sufficiency

Commercial Customers

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- Unlike the residential sector, commercial customers can take solid waste service from WMU **or** obtain comparable service from a private hauler
- Private hauler pricing is based on the market
- WMU is constrained in increasing rates to commercial business because private haulers are not subject to WMU's revenue-sufficiency needs

Commercial Curbit Rates (2013)

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Rate	Unit	Current Rate	Full Cost Rate	Revenue Sufficient Rate
2x/week Frequency	\$/month	\$34.95	\$35.36	\$55.83
5x/week Frequency	\$/month	\$34.95	\$88.41	\$139.59

- Commercial Curbit customers are now charged the same for different service frequencies
- Downtown customers receiving daily service should pay commensurate rates

Commercial Businesses Receiving No Service

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Rate	Unit	Current Rate	Full Cost Rate	Revenue Sufficient Rate
Commercial No Service	\$/month	\$34.95	\$0	\$0

- Results of this rate modeling exercise eliminate the mandatory minimum charge to businesses that receive no solid waste service from WMU

Commercial Container Rates (2013)

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Selected Services	Unit	Current Rate	Full Cost Rate	Revenue Sufficient Rate
2-yard, 2x/week	\$/month	Not Provided	\$97.38	\$153.75
8-yard, 2x/week	\$/month	\$251.53	\$189.63	\$299.50
Extra (on-call) service, 8-yard	\$/tip	\$29.00	\$70.00	\$95.20

- Rates calculated for additional container sizes (2-yd and 4-yd)
- Full cost rates are consistently below current rates
- **Revenue sufficient rates** are consistently **above** current rates
- WMU's current rate structure (per tip) encourages businesses to request on-call rather than scheduled service
 - Counter to private hauler preference

Maintaining Commercial Revenues

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MAINTAINING COMMERCIAL SECTOR REVENUES IN A COMPETITIVE MARKET

Commercial Solid Waste Options

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- **Status Quo** (WMU competes in open market)
 - Flatten commercial rates and aggressively attempt to win back market share
 - Achieve revenue targets through residential rate payers
- **Aggressive:** WMU takes back commercial collection for all customers
 - Maximizes revenue
 - Achieves maximum rate equality
 - Displaces existing collection business

Commercial Solid Waste Options (continued)

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- **Intermediate Option 1:** Establish non-exclusive franchise for all licensed haulers (including WMU)
- **Intermediate Option 2:** Charge a waste disposal assessment to commercial properties
- **Intermediate Option 3:** Outsource all dumpster collection

Analysis of Options

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Criteria For Potential Alternatives

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- **The alternative must reduce, or at least not increase, the current cost of providing service**
- **The alternative should move WMU towards state and/or national best practices**
- **Alternatives that are known “non-starters” were not analyzed**

Single Stream Curbside Recycling

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- Replace 2nd weekly refuse collection with single stream recycling
- Re-route refuse and recycling for Mon through Fri collection
- Distribute 96-gal recycling carts to all Curbit customers
- Measure and publicize before and after recycling rates



Residential Volume Based Pricing

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- Rates are tiered to give incentive to recycle more and dispose of less
 - 35 gallon refuse = \$18.50
 - 65 gallon refuse = \$23.50
 - 95 gallon refuse = \$33.00
- 15% to 30% reduction in disposed waste



Residential Volume Based Pricing Implementation

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- **First, implement curbside recycling collection**
- **Pilot test volume based pricing across multiple economic strata**
 - Verify cart size distribution
 - Verify rate differentiation
- **Determine City-wide roll-out plan**
 - Plan for orderly cart replacement
 - Implement incrementally over time

Other Alternatives Analyzed

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- **Integrating Elderly/Disabled Collection**
- **Directly Marketing Cardboard**
- **Offering Commercial Recycling Collection**
- **Offering Additional Commercial Container Sizes**
- **Opening Transfer Station to Private Haulers**

Conclusions

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Answers to Key Questions

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- **Establish multi-family customer class with lower rate compared to single family households**
- **Eliminate mandatory commercial charge**

Summary Considerations

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- Evolve services levels to state and national standards
- Measure and publicize improvements to recycling rates that result from changes in services
- Plan on establishing and maintaining education and outreach efforts
- Revisit options for serving commercial customers if revenue-sufficient rates cannot be charged

Questions

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Back-up slides

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Benchmarking – National High-Diversifiers

Municipality	Population	Diversion Rate (2011)
Ann Arbor, MI	114,101	43%
Austin, TX	795,518	37%
Gainesville-Alachua, FL	223,467	41%
Madison, WI	233,777	57%
San Francisco, CA	805,463	77%

Current Revenue Path



Service	CY2011	CY2012	CY2013	CY2014
Residential Revenues	\$2,115,324	\$2,528,452	\$3,022,255	\$3,195,630
Commercial Revenue	\$441,722	\$444,872	\$450,876	\$454,047
Roll-off Revenue	\$11,438	\$11,520	\$11,602	\$11,683
Container Rental Revenue	\$71,775	\$73,922	\$76,092	\$76,627
Transfer Station Revenue	\$53,162	\$53,541	\$53,920	\$54,299
Total Revenue	\$2,693,421	\$3,112,306	\$3,614,744	\$3,792,286

• Total Solid Waste Revenue Increase 2011 to 2014 = 41%