

SAVE MONEY ON SOLID WASTE: UNDERSTANDING FULL COSTS AND FUNDING SOURCES

AFTERNOON WORKING SESSION

Sponsored by:
CT DEEP
US EPA Region 1

Presented by:
DSM
Environmental
Services
GAA

AFTERNOON OBJECTIVES

- Help public officials and solid waste program managers understand full cost accounting and how to set equitable fees for solid waste services
- Begin work on key implementation issues depending on type of collection system in place at the participating municipalities:
 - Grants available through CT DEEP for implementation costs
 - Technical assistance available through CT DEEP contract with DSM Environmental/GAA

AFTERNOON AGENDA

1:00 REVIEW OF FULL COST ACCOUNTING PRINCIPLES

1:20 EXAMPLES / CASE STUDIES

1:30 SMALL GROUP WORK

(1) UBP at transfer stations

(2) UBP with organized curbside

(3) UBP in subscription communities

2:45 REGROUP

3:00 SESSION ENDS

FULL COST ACCOUNTING MUST START WITH ENTERPRISE OR PROGRAM BUDGET

- Budgets typically Line Item or Program based
 - Enterprise funds (budgets) are essentially program budgets
 - Enterprise typically stands alone while a program may be a part of a larger activity (e.g., solid waste activities in a larger public works department)
 - Line item budgets can be converted to program (enterprise) budgets using activity based cost accounting

- Activity Based Accounting:
 - Key to establishing program budget from line item budget
 - Separate accounting for all costs associated with a specific service or part of a service
 - Cost allocation methods for combined costs

ENTERPRISE FUNDS

- **Separate from General Fund:**
 - Follow full cost accounting principals
 - Funded directly, or may have some support from general fund
 - Activity based budgeting and fee setting
- **Revenue Sources might include:**
 - Bag or Cart fees
 - Base rates or flat fees (annual or quarterly)
 - Private hauler licenses or fees
 - Revenues from recycling, if any
 - Investment income
- **Discussion ignores large facility costs (disposal or processing)**

BENEFITS OF FULL COST ACCOUNTING AND PROGRAM BUDGETING

- Determine the actual cost of MSW management
- Clearly communicate MSW costs to the public
- Better manage MSW program costs – You can't manage what you can't measure
- Compare what you are spending on the mix of MSW Services
- Help set appropriate rates and user charges

CONVERTING LINE ITEM BUDGET TO PROGRAM BUDGETS

- Identify each activity that you want to know the costs:
 - Transfer and disposal
 - Transfer station operation
 - Collection of refuse, bulky waste, recycling and yard waste/organics
 - HHW program costs
 - All solid waste program costs

ACTIVITY BASED ACCOUNTING

- Define the “Activity”, then identify all costs associated with that activity
 - Collection of refuse
 - Collection of recyclables
 - Bulky waste collection and disposal
 - Operation of the transfer station
 - Special waste management

- Determine Direct Costs
 - Labor and benefits
 - Vehicle and Equipment O&M costs
 - Vehicle and Equipment Annual Depreciation Expenses
 - Purchase price divided by useful life of asset (years) = \$/year
 - Contract costs
 - Facility costs
 - Operating
 - Depreciation

ACTIVITY BASED ACCOUNTING

- **Determine Indirect Costs**
 - Accounting and Billing, including Payroll
 - Building Operations
 - Executive Oversight
 - Insurance and Legal
 - Management
 - Purchasing
 - Records Management
 - Solid Waste Advisory Council
 - Other

PERFORMING COST ALLOCATIONS

■ Allocating Direct Costs:

- First find all costs that are entirely devoted to the activity – the easy part
- For those costs that cut across activities, think of a logical way to allocate these costs to the activity (this is not rocket science and it does not have to be exact – especially when you first do this)
- Logical allocation methods – percent of labor (full time equivalents – FTE's), tons,

■ Allocating Indirect Costs

- Can be done using FTE's, or the % of Total Budget
- Example:
 - Subtract from Total City/Town Budget centralized services
 - Calculate Solid Waste Program Budget as a % of Net Total City Budget
 - If Solid Waste Program Budget = \$2 million, City Budget = \$12 million, and Centralized Services = \$2 million
 - Then Solid Waste Budget is 20% of Net City Budget, and 20% of centralized services
 - And \$400k should be allocated to Solid Waste Program Costs

EXAMPLE

LABOR COSTS					
Employee	Name	Annual Wages	Annual Benefits (Health, Life, Disability, SS)	Post Employment Benefits (Pension, Health Insurances, Other)	Total Costs
		(\$)	(\$)	(\$)	(\$)
Collection Driver	John Doe	\$45,000	\$9,000	\$9,000	\$63,000
Mechanic	Jason White	\$38,000	\$7,600	\$3,800	\$49,400

Expenditure	Name	Total Annual Cost (\$)	Curbside Collection					
			Refuse %	(\$)	Recycling %	(\$)	Yard Waste %	(\$)
Collection Driver	John Doe	\$63,000	50%	\$31,500	50%	\$31,500	0%	\$0
Mechanic	Jason White	\$49,400	40%	\$19,760	40%	\$19,760	20%	\$9,880
Depreciation	Collection Truck/Spot	\$27,500	50%	\$13,750	50%	\$13,750	0%	\$0
Fuel	Collection Truck/Spot	\$18,000	50%	\$9,000	50%	\$9,000	0%	\$0

BASE YEAR

- **Cost allocations can be prepared using a fixed with carry-forward methodology.**
 - **Estimated costs, based on prior year appropriated costs, and estimated allocations are determined before the beginning of the fiscal year.**
 - **When prior year actual costs become known, recalculations can be made using actual costs.**
 - **The differences in allocated cost between estimated and actual is rolled forward into the subsequent year plan, as an adjustment.**
 - **Costs allocated are exclusive of any costs that are recovered by direct billing.**

RATE SETTING

- Once all costs for a program (activity) have been established then it is possible to establish rates
- Key issues
 - Will some part of program be funded from general budget (through taxes) or are you trying to raise total cost through revenues
 - Will there be fixed fees and variable fees, or are all costs raised on variable basis
 - What is the correct revenue unit?
 - Household
 - Pounds or volume
 - Per capita
 - Per PAYT bag
 - Per cart
 - What percent non-payment do you expect (and are you going to cover non-payment through increase in rates for everyone else)
 - What happens if you miss your revenue target?

CURBSIDE PROGRAMS

■ Cost areas:

- Collection contract(s) for refuse, recycling, bulky waste and yard waste
- If not contract, collection labor for each stream
- Transfer and disposal costs – variable, depending on quantity
- Yard waste processing can be fixed (own site) or variable
- Recycling processing variable or embedded in collection cost (fixed)
- If not contract, collection vehicle O&M costs (fuel, maintenance, other)
- Vehicle depreciation costs,
- Amortization of future outlays (capital replacement)
- Direct cost of Management, Enforcement and Outreach
- Indirect costs



CURBSIDE PROGRAMS

- Revenues in addition to fees:
 - Interest income
 - Salvage of equipment
 - Grants
 - Property taxes
 - Utility bills

- Revenue Setting Options
 - Rates for disposal (and transfer) costs only
 - Rates include collection of refuse and recycling
 - Minimum flat rate plus bag or cart charges
 - Understand variable costs that may not be met by revenues

TRANSFER STATIONS/DROP-OFFS

■ Cost Areas:

- Labor Costs for refuse, recycling, bulky waste, organics, C&D
- Equipment Costs
 - Depreciation and Capital Replacement
 - O&M (Fuel, maintenance, other)
- Refuse transfer and disposal costs
- Transfer and processing/disposal Costs for C&D, bulky materials, recycling, HHW/Universal Wastes
- Facility / Building costs
- Site maintenance costs
- Landfill closure fund



TRANSFER STATION/DROP-OFF

■ Revenue Areas

- Interest Income
- Sale of Recyclables
- Salvage of Equipment
- Miscellaneous Revenue
- Transfer from General Fund
- Fee for service (volume or weight based)



■ Revenue Options

- Bag, Can or other Volume based fees (bags or punch card)
- Fee based on disposal only or full cost (enterprise fund)
- Minimum fixed annual fee – vehicle sticker
- Hauler license fees and annual sticker

CASE EXAMPLE – DROP-OFF COMMUNITY

- Service Population @ 20,000 but about 1,800 regular households users
 - Capital Costs covered – but no reserve
 - Fees not meeting operating cost
- Operating Costs = \$650,000
- Revenues:
 - Recycling \$100,000
 - Tip fees for C&D (\$100/ton) = \$300,000
- Set equitable fees for residents and nonresidents
 - Punch cards set at \$3 punch for residents and \$4 punch for non residents
 - Rely on C&D tip fee to subsidize part of operations

GARBAGE (BLACK CARTS)	MONTHLY RATE One Cart (Weekly Service)	MONTHLY RATE Additional Cart (Weekly Service)
10-gallon micro can	\$ 6.97	
20-gallon mini cart	\$12.27	
32-gallon cart	\$17.37	\$12.32
45-gallon cart	\$25.16	
64-gallon cart	\$29.68	\$21.09
96-gallon cart	\$40.31	\$28.68
10-gallon cart		\$4.16
32-gallon cart		\$5.83
MISCELLANEOUS SERVICES		PER OCCURRENCE
Extra garbage (32-gallon equivalent)		\$4.03
Return Trip		\$8.05
Carry-out Charge (per 25 ft., per month)		\$3.45
Drive-in Charge (per month)		\$4.60
Overweight/Oversize Container		\$3.45
Redelivery of Containers		\$11.51
Cart Cleaning		\$8.63
Sunken Can Surcharge (per month)		\$8.63
BULKY WASTE COLLECTION		PER OCCURRENCE
White goods (except refrigerators/freezers)		\$94.79
Refrigerators/Freezers		\$114.79
Sofas, Chairs, Mattresses		\$109.79

CASE EXAMPLE: SUBSCRIPTION COMMUNITY

Franchised community rate schedule at left (it can get this complex), or more simply could be disposal cost on bag purchases (\$1 per bag)

SMALL GROUPS

- Curbside – Contract or municipal crew
- Transfer station/drop-off
- Subscription communities

ASSIGNMENT

- **Develop Information on Services/Program (Worksheet 1)**
- **Pick an example community among participants**
- **Develop Budget Information**
- **Review Direct and Indirect Costs**
- **Review Cost Allocation Methods**
- **Calculate Potential Unit Costs**

NEXT STEPS

- What do you need to take the next step?
 - Commitment from higher up to pursue?
 - Buy-in from Advisory Committee?
 - Program budget developed based on concepts discussed today
 - Technical assistance (DSM/GAA/CT DEEP)
 - Online: <http://www.ct.gov/deep/cwp/view.asp?q=324920>

