Waste Management and Remediation Services: Turnover Measures and Practices at the U.S. Census Bureau

26th Meeting of the Voorburg Group Newport, South Wales

John B. Murphy Assistant Division Chief for Classification Activities U.S. Census Bureau



Definition of the Service

Revenue received for the provision of waste management and remediation services

- Market Provision of Services
 - Employers
 - Non-employers
- Government Provision of Services
 - Cost of services (expenses as proxy for revenue)
 - Employment





2007 Size Data

Туре	Estabs.	Employment		Revenue	
Employers	22,202	393,179		\$76,924,944,000	
Non-Employers 20,866		N/A	\$	1,677,620,000	
Government	N/A	249,847		N/A	
Total	??	664,000?		\$78,602,564,000 +	





Turnover Data Availability

Comprehensive Economic Census Data

- Collected in years ending with 2 and 7
- Detailed industry and product turnover data

Service Annual Survey

- Sample based estimates
- Industry turnover estimates
- Product turnover estimates at Industry Group level

Quarterly Services Survey

- Sample based estimates
- Industry group revenue estimates
- Class of customer breakouts



Additional Data Collected

Economic Census

- Class of customer breakdown
- Value of exported services
- Employment/payroll
- Value of employer benefits
- Franchise status

Service Annual Survey

- Operating expenses (personnel costs, expensed materials and supplies, expensed purchased services, other expenses)
- e-commerce revenue



Census Collection Practices

- Single survey form covers multiple NAICS industries
- Industry assigned by respondent based on kind-ofbusiness (kb) activity inquiries
- Common product list collected across many (but not all) industries
- Both sections (kb and product) of the survey form are considered
- Resulting data tabulated at 2, 3, 4, 5, and 6 digit levels of NAICS



Other Practices

- Service Annual Survey (SAS) uses industry group specific forms including product lines but no KBs
- SAS sample augmentation for births
- SAS benchmarked to Economic Census
- Quarterly Services Survey (QSS) subset of SAS
- QSS benchmarked to SAS
- SAS mandatory
- QSS voluntary



Additional Details Collected in 2007 and Later

 Business Expenses – In Census years, the SAS program collects 20 expense groupings, including estimates for expenditures on cost of purchased software; cost of purchased repair and maintenance services, cost of data processing and purchased computer services; and cost of rental and lease payments.



Iterative Process

Revenue and Product Details

- 1997 10 sources of revenue below the industry included on a single form for all waste management and remediation (Pre-NAPCS)
- 2002 Over 80 detailed NAPCS products included on the waster management and remediation services questionnaire
- 2007 Separate questionnaires for waste management services and remediation services – detailed products about the same but tailored to particular types of businesses



Example Product Collection

- Split between residential and non-residential waste, recyclable materials, and both when presorted for both hazardous and nonhazardous
 - Specific request for receipts for subcontract work
- Detail for document and file destruction services
- Detail for event waste management receipts
- Snow plowing receipts
- Waste management facility maintenance receipts split between closed, open, and separate closure services
- Disposal tipping fees for hazardous and non-hazardous waste
- Full questionnaires available at <u>http://bhs.econ.census.gov/ec07/CEN_2007FORMS.html</u>



Categories of Hazardous Waste

- Organic solvents
- Oils, greases, and residues
- Inorganic sludge
- Heavy metal solutions
- Pesticides, herbicides, and fungicides
- Polychlorinated biphenyls (PCBs)
- Biological infectious waste
- Radioactive waste
- Used tires
- Used batteries
- Other hazardous waste

Categories of hazardous waste will differ among countries based on specific regulations



Other Services Collected

- Sale or brokerage of waste materials
- Sale or brokerage of recycled materials
- Sale of new or used waste management equipment
- Rental and leasing fees received for waste management equipment
- Waste to energy receipts
- Environmental consulting services
- Other waste management consulting services



Product Distribution by Industry (1)

Distribution of Nonhazardous Waste Collection Services						
(non-residential) by Industry						

 Industry
 Establishments
 Value (\$ approx)
 Percent

 • 562111
 4,842
 11,643,308,000
 97.5%

- 562112 79
- 562211 66 58,253,000

17

- 562212 135 99,825,000 0.8%
- 562219 <u>0.2%</u>

11,945,440,000 100%

1.0%

0.5%

111,145,000

32,909,000



Product Distribution by Industry (2)

Distribution of Site Remediation Services by Industry									
	Industry	Establishments	Value (\$ appr	ox)	Percent				
•	562111	34	48,976,000)	0.95%				
•	562112	82	22,135,00	0C	0.43%				
•	562119	36	10,018,000)	0.20%				
•	56221X	44	61,416,00	0C	1.19%				
•	562910	1,919 4	,923,662,000	95.0	00%				
•	562290	18	442,00	0	0.01%				
•	56299X	121	<u>114,845,000</u>	<u>2.</u>	<u>22%</u>				
			5,181,494,000	10	0%	-			



Comparability of Price and Product Data

Limited areas that there is equal coverage:

Covered 3811/562111 Not Covered 3700/221320 3812/562112 3821/562212, 562213, 562219 3822/562211 3830/562920 3900/562910, 562991, 562998

However, the one comparable area covers almost 48 percent of the total market activity.



Additional Work

Detail important missing products in NAPCS – particularly related to increased detail for recyclable materials

Implement system changes to allow a single product number across all industries





Questions?

John B. Murphy

Assistant Division Chief for Classification Activities, U.S. Bureau of the Census

John.Burns.Murphy@census.gov

(301) 763-5172

