APPENDIX D SUMMARY OF A SURVEY OF POTENTIAL STUDY USERS

D.1 Overview

To assist in the identification of priorities for collecting recycling economic information, a survey was sent to approximately 350 recycling officials, economic developers and private sector professionals with an interest in recycling. Sixty-eight surveys were returned, with 31 responses from economic developers, 19 responses from private sector organizations (four venture capitalists, four bankers, two other financial, three recycling business representatives and six consultants) and 18 responses from government recycling officials.

Respondents were first asked to identify the three ***categories*** of information which would be most useful to them. Then, for each of the categories they selected, they were asked to identify the three most useful ***data types***. The survey results are summarized below in Section D.2. Note that, since respondents were asked to identify three priorities for each category, the percentages cited below do not add up to 100%. The survey form used is presented in Section D.3.

D.2 Summary of Survey Results

While not designed to be statistically representative, this informal survey provides insight into the information priorities of the three respondent groups. The results provide indications, though not outright conclusions, of the relative utility of various types of information, and should be considered in determining priorities for a study of the U.S. recycling industry.

The survey results indicate that all of the broad categories and specific data types listed in the survey have some degree of utility to the respondents. However, two categories emerge as top priorities: industry size and market information. Similarly, within each broad category, a small number of specific data types emerge as top priorities, although most all data types listed are identified as useful. Table D-1 below summarizes the results of the survey and identifies top priority categories and data types. These results are discussed further following the table.

Table D.1 Results of Data Users Survey

Category of Information (In order of priority)	Top Priority Data Types	Second Priority Data Types
1. *Industry Size*	• employment • annual sales	• number of firms • total impacts from I/O model • annual production • annual wages • value-added • exports value/volume
2. *Market Information*	• domestic demand • recycled material prices • summary of factors influencing demand • supply data	• recycled product prices • production capacity • recycled material export/import trends • recycled material inventories • recycled product export trends
3. *Facility-Specific Information*	• average statistics for particular types of firms, especially employment and wage statistics	

Category of Information (In order of priority)	Top Priority Data Types	Second Priority Data Types
	• detailed case studies of specific business development projects	
4. *Net Economic Benefits*	• net employment • net tax revenue generation • net value added	
5. *Investment Information*	• planned expansions and investments • industry structure • summary of growth drivers	• sources of capital • annual capital investment • uses of capital • mergers and acquisitions summary
6. *Financial Performance Information*	• average investment performance • financial ratios • financial statistics	• number of loan defaults • average debt/equity • number of bankruptcies • stock values of public companies
7. *Comparisons to other industries*	These industries were most often identified: • virgin resource extraction • all manufacturing • landfill/incineration • utilities	

Most Useful Broad Categories of Information

Industry size and *market information* were tied as the most useful categories of information, with 65% of the respondents identifying each of these as a top priority. These were followed *facility-specific information* (57%), *investment information* (44%), *net benefits* (37%) and *financial performance* (26%). Only 6% of respondents identified the category of *comparisons to other industries* as a top priority. Private sector respondents showed less pronounced preference for any single category of information than the overall results indicate. Recycling officials showed most preference for market information, while economic developers decisively identified industry size as the most useful category.

Most Useful Data Types within the Industry Size Category

Employment and *annual sales* were identified by all groups as the most useful data types within the industry size category. These were followed by *number of firms, total impacts derived from an input-output model, annual production, annual wages, value added,* and *exports value/volume* in order of preference. Economic developers and private sector respondents were consistent with the overall results, with economic developers also expressing a strong preference for employment data. Recycling officials expressed less preference among the data types.

Most Useful Data Types within the Market Information Category

Overall, respondents identified the most useful types of data in this category as *domestic demand, recycled material prices, summary of factors influencing markets,* and *supply data*. Other data types listed were roughly even in number of responses. Results for private sector respondents and economic developers were similar to the overall result, but recycling officials expressed notably higher interest in domestic demand and recycled material pricing information.

Most Useful Data Types with the Facility-Specific Information Category

Respondents expressed equal interest in all the data types listed under this category, with only economic developers expressing a strong preference, for *employment* and for *wage* data. This may indicate a general desire for *average statistics* which could be derived from the other information categories (e.g., average number of employees per firm for specific types of firms), and also for detailed case studies of actual business development projects, including a wide variety of information.

Most Useful Data Types within the Net Economic Benefits Category

Net economic benefits refers to an explanation of the impacts of recycling, which takes into account tradeoffs with other industries such as virgin resource extraction and manufacturing, landfilling and incineration. All respondents expressed equal support for the three categories listed, *net tax revenue generation, net job creation* and *net value added*.

Most Useful Data Types within the Investment Information Category

Overall, respondents identified *planned expansions and investments, industry structure* and *summary of growth drivers* as the top priority data types in this category. These were followed by *sources of capital, annual capital investment, uses of capital* and *mergers, acquisition and IPO summary,* each of which received significantly fewer responses. Results from economic developers and private sector respondents were similar to the overall result. Recycling officials expressed much less discernable priorities for any particular category.

Most Useful Data Types within the Financial Performance Category

Overall, respondents identified *financial statistics, average investment performance* and *financial ratios* as the top data types in this category. These were followed by *number of loan defaults, average debt/equity ratio, number of bankruptcies* and *stock values of public companies*, each of which received significantly fewer responses. Economic developers were consistent with the overall responses. Private sector respondents expressed significant interest in average investment performance and financial ratios. Responses from recycling officials were more mixed, with no discernable priorities.

Most Useful Types of Industry Comparisons

Relatively few respondents offered suggestions for the types of industry comparisons which would be most useful. Industries suggested for comparison include manufacturing, virgin materials extraction, landfilling/incineration and utilities. Suggestions for data to compare drew from all of the above categories.

D.3 Survey Questionnaire

Northeast Recycling Council
139 Main Street, Suite 401
Brattleboro, VT 05302
Phone: (802) 254-3636
Fax: (802) 254-5870
Email: *nerc@sover.net*

What do you need to know about the U.S. Recycling Industry?

Your participation in this brief fax-back survey may yield the information you need.

The recycling industry has grown significantly over the past decade and is spawning a wealth of entrepreneurial activity throughout the nation. For instance, a 1994 Northeast Recycling Council (NERC) study estimated that, in the Northeast region alone, over 100,000 people were employed in firms which collect or process recycled glass, paper, metals and other materials, or in manufacturing firms which make value-added products from these materials.

As the recycling industry has grown, so too has the need for economic information such as the size of various industry sectors, investment trends, financial performance and market trends. Financiers, economic developers, industry officials and advocates need this information to better understand trends and opportunities in the still young recycling industry. Unfortunately, much of this information is not readily available, and is difficult and costly to gather.

To address this problem, NERC, a coalition of state recycling and economic development agencies from 10 Northeastern states, is developing a methodology for gathering economic information on the nation's recycling industry. Funded by the U.S. Environmental Protection Agency and NERC's member states, the methodology developed will yield a variety of data at the state and national level. A major goal of the project is to establish priorities among the various categories of economic information which might be collected. This survey is designed to assist NERC in establishing these priorities, and in better understanding the information needs of different groups.

Please take a moment to complete this survey and fax it back to NERC by Tuesday, May 13, 1997 (fax: 802-254-5870). For additional information on the project, contact Ellen Pratt or Edward Boisson at NERC.

THANK YOU!!

Recycling Economic Information Survey

Please fax to the NERC office at (802) 254-5870 by Tuesday, May 13.

1. Check the category which best describes you:

__ Economic/Community Developer
__ Banker
__ Venture Capitalist
__ Investment Banker
__ Individual Investor
__ Other Investor:_____
__ Financial Analyst
__ Government Recycling Official
__ Private Sector Recycling Advocate
__ Academic
__ Industry
__ Other:_____

2. The following table lists seven categories of economic information (e.g. Industry Size, Market Information) and examples of data for each category (e.g., employment, sources and uses of capital). Please identify the three categories of information which, if collected on the recycling industry, would be most useful to you. Number these selected categories from 1 to 3 to indicate priority. For each selected category, check off the three most useful types of data. Feel free to add data types not listed.

Note: For the purposes of this survey, unless otherwise indicated, assume that the data types listed would be available at the state and national levels, and would be reported separately for each broadly-defined recycled material type (e.g., glass, paper, plastic, etc.), and for each broadly-defined category of recycling establishment (e.g., collector, processor, manufacturer, etc.).

___ Category 1: Industry Size

Data Types:

__ *employment*
__ *annual wages*
__ *annual sales ($)*
__ *value-added*
__ *annual production (tons or units)*
__ *value and volume of exports ($, tons)*
__ *number of firms*
__ *total impacts, derived from an input-output model, including direct, indirect and induced employment, sales and wages.*

___ Category 2: Investment Information

Data Types:

__ *annual capital investment*
__ *planned expansions and investments*
__ *sources of capital*
__ *uses of capital*
__ *qualitative summary of factors driving industry growth*
__ *summary of mergers, acquisitions and initial public offerings*
__ *industry structure (number and size of firms, number of new firms, level of consolidation)*

___ Category 3: Financial Performance

Data Types:

__ *number of loan defaults*
__ *number of bankruptcies*
__ *average debt/equity*
__ *average operating ratios derived from financial statements (e.g., average profit margin and others as published in RMA's Annual Statement Studies)*
__ *average performance of investments (e.g., return on investment)*
__ *average financial performance statistics (e.g., average net profit in dollars)*
__ *stock values of public companies*

___ Category 4: Market Information

Data Types:

__ *recycled material price trends*
__ *recycled-content product price trends*
__ *production capacity by industry sector*
__ *U.S. imports of recycled materials*
__ *inventories of recycled materials by industry sector*
__ *factors influencing market trends*
__ *supply (tons of recycled materials recovered annually)*
__ *domestic demand (use of recycled materials by industry)*
__ *exports of recycled materials by port and destination*
__ *exports of recycled-content products by port and dest.*

__ **Category 5: Facility-Specific Business Development Information**

(i.e., typical figures for generic types of development projects, e.g., a 100 TPD composting operation)

Data Types:

__ *average wages per employee*
__ *number of employees (permanent, construction)*
__ *annual sales*
__ *direct, indirect and induced impacts*
__ *capital costs*
__ *total labor costs*
__ *skill levels required of workers*
__ *energy, water, other resource requirements*
__ *building requirements*
__ *type of equipment/technology used*

__ **Category 6: Net Economic Benefits**

(i.e., accounting for tradeoffs with other industries, e.g., jobs lost in forestry due to increased use of waste paper in mills, or jobs lost in landfill operation due to increased recycling)

Data Types:

__ *net job creation*
__ *net value added*
__ *net tax revenue generation*

__ **Category 7: Comparisons between the recycling industry and other industries**

What comparisons are most important (e.g., total employment, sales)?

What other industries are most important to compare with the recycling industry?

3. Do you have any comments or suggestions regarding how economic information on the recycling industry might best be obtained?

4. NERC will distribute a draft copy of its methodology for comment to interested individuals. Would you like to be added to this review list?

___ No ___ Yes

If Yes,

Name:	Phone:
Company:	Fax:
Address:	Email:

Founded in 1987 by the Council of State Governments' Eastern Regional Conference, NERC's mission is to expand the Northeast recycling industry, while maximizing its full economic and environmental benefits. NERC is a non-profit, non-partisan organization, created, directed and supported by its member states.

___ **Please send me additional information about the Northeast Recycling Council.**

Thank you for your time!