

***A Review of Successful Business Reuse
Programs & Implications
For the Twin Cities Metropolitan Area***

*Prepared for the
Solid Waste Management Coordinating Board*

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JL Taitt & Associates, Inc.

with assistance from

Katy Boone & Associates, Inc.

J.L. TAITT™
AND ASSOCIATES INC.

SPACE DESIGN

FOR WASTE REDUCTION & RECYCLING

A REVIEW OF SUCCESSFUL BUSINESS REUSE PROGRAMS & IMPLICATIONS FOR THE TWIN CITIES METROPOLITAN AREA

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TABLE OF CONTENTS

Executive Summary	1
I. Project Background.....	3
II. Project Scope	4
A. Identify Successful Programs	4
1. List of Business Reuse Programs to Research.....	4
2. Questionnaire to Interview Business Reuse Program Staff to Profile Programs Based on Preliminary Information	6
3. Selection Criteria and Recommended Programs for Additional Research and Evaluation	7
B. Research, Evaluate and Rank Selected Programs	8
1. Additional Research and Report on Selected Programs	8
2. Evaluate and Rank Selected Programs	8
3. Request for Additional Information	11
III. Business Roundtable Discussion	12
A. Business Roundtable Discussion Questions	12
B. Results of Discussion	12
IV. Conclusion	14
A. SWMCB Evaluation Criteria from the Request for Proposals.....	14
1. Greatest Tonnage or Volume of Materials Reused.....	14
2. Least Cost Per Ton	14
3. Greatest Variety of Materials Reused.....	15
4. Greatest Opportunity for Waste Stream Toxicity Reduction.....	15
5. Least Amount of Program Administration	15
6. Fewest Barriers/Challenges	15
7. Business Preferences	15
B. Recommendations for a New Business Reuse Program.....	16
1. The Key Strategy for the Program	16
2. Program Options	16
3. Important Characteristics of the New Program	16
C. A Model Business Reuse Program for the SWMCB Region.....	22

TABLE OF CONTENTS

V. Appendices 25

Appendix A: Business Reuse Program Questionnaire to Obtain Preliminary Program Information..... A-1

Appendix B: Profiles of 24 Business Reuse Programs Based on Preliminary Information..... B-1

Appendix C: Additional Research and Evaluation of 11 Recommended Business Reuse Programs..... C-1

Appendix D: Business Reuse Program Questionnaire to Obtain Detailed Program Information..... D-1

Appendix E: Report on Seven Selected Business Reuse ProgramsE-1

Appendix F: Additional Information on Successful Business Reuse ProgramsF-1

Appendix G: Questions for August 29, 2000 Business Roundtable Discussion..... G-1

Appendix H: Notes on August 29, 2000 Business Roundtable Discussion..... H-1

EXECUTIVE SUMMARY

The mission of the Solid Waste Management Coordinating Board (SWMCB) representing the Minnesota counties of Anoka, Carver, Dakota, Hennepin, Ramsey and Washington, is to increase the efficiency and environmental effectiveness of the region's solid waste management system. The region is targeting a reuse of 50,000 tons of material per year by 2003, drawing from both the commercial and residential sectors. From 1995 to 1999, commercial reuse was facilitated through the SWMCB's Metro Area eXchange Program (MAX) operated by the Minnesota Technical Assistance Program.

The purpose of the Project was to identify and research successful business reuse programs in the United States and Canada and to determine the best type of program for the SWMCB region. From an original list of 55 business reuse programs, four programs were identified as the most successful: (1) Indiana Materials Exchange; (2) Iowa Waste Exchange; (3) Ohio Materials Exchange; and (4) Southern Waste Information Exchange, Inc.

Based on this research and a Business Roundtable Discussion held to solicit feedback from the Twin Cities business community, the potential for success of a business reuse program in the SWMCB region is excellent. There is a large geographic concentration of businesses in the Twin Cities and surrounding communities that generate a wide range of MSW and hazardous and non-hazardous industrial materials that could be part of a business reuse program. Many of these businesses have a commitment to pursue environmentally sound waste management practices with waste reduction and recycling programs already in place within their organizations. These same businesses should be very good candidates for participating in a business reuse program.

Based on the review of the successful business reuse programs around the country, it is clear that the structure and focus of these programs are very different from the way business reuse services have been offered in the Twin Cities metropolitan area in the past. These programs meet the needs of businesses first by assisting them in exchanging the types of materials they want to exchange without a specific focus on the MSW stream. These programs assist with the integration of the reuse concept into the daily operations and corporate culture of businesses. Once the reuse concept is integrated, the option of targeting the MSW stream can be exercised.

The guiding principles for the new program are to:

- Locate the program in the right organization.
- Maximize staff time spent interfacing with businesses.
- Minimize staff time working on administrative issues.

Given these principles, the best type of business reuse program in the Twin Cities would be located in an existing Twin Cities private or nonprofit organization already positioned

to work with businesses and contract with an experienced outside organization for business reuse infrastructure services. These services include catalog publication and updating, fax-on-demand services to receive information on materials wanted and available and website management.

I. PROJECT BACKGROUND

The Solid Waste Management Coordinating Board (SWMCB), formed in 1990, is a joint powers board comprised of two county commissioners from the Minnesota counties of Anoka, Carver, Dakota, Hennepin, Ramsey and Washington. To enhance intergovernmental coordination, the Board also includes the Director of the Minnesota Office of Environmental Assistance and the Minnesota Pollution Control Agency Metro Division Manager. The mission of the SWMCB is to increase the efficiency and environmental effectiveness of the region's solid waste management system.

According to the SWMCB's Regional Solid Waste Master Plan for managing the six-county Twin Cities metropolitan area's solid waste through the year 2017, reuse has significant potential to reduce waste in the region. The region is targeting a reuse of 50,000 tons of material per year by 2003, drawing from both the commercial and residential sectors. From 1995 to 1999, commercial reuse was facilitated through the SWMCB's Metro Area eXchange Program (MAX) operated by the Minnesota Technical Assistance Program. On March 24, 2000 the SWMCB issued a Request for Proposals to "Evaluate and Recommend Programs to Facilitate the Reuse of Materials Redirected from the Commercial Waste Stream."

The SWMCB contracted with JL Taitt & Associates, Inc. with assistance from Katy Boone and Associates, Inc. to identify and research successful business reuse programs and to determine the best type of program for the SWMCB region. The Contractor identified and researched business reuse programs operating around the United States and Canada to select successful programs. These successful programs were used to make recommendations to the SWMCB regarding the development of a new business reuse program to serve the six-county Twin Cities metropolitan area.

The Contractor's report is divided into the following three sections. Section II describes the project scope including the identification, research, evaluation and ranking of successful business reuse programs. Section III describes the results of a Business Roundtable Discussion to solicit feedback from the Twin Cities business community on the willingness to use various reuse methods. Section IV contains the conclusion of the Contractor's work including an evaluation of the successful business reuse programs based on the criteria set forth in the Request for Proposals, recommendations for a new business reuse program and a model business reuse program for the Twin Cities metropolitan area.

II. PROJECT SCOPE

A. Identify Successful Programs

The first phase of the project as outlined in the Request for Proposals was to:

- Research and identify successful local, state and national business reuse programs existing within an economic/commercial base similar to the Twin Cities metropolitan area. Include minimal reference to international programs.
- Provide a brief description of each successful program.
- Determine a select list of programs for additional research and evaluation.

The Contractor proceeded to:

- Create a list of business reuse programs to research.
- Develop a questionnaire to conduct phone interviews with business reuse program staff and to obtain preliminary program information.
- Develop selection criteria and recommend programs for additional research and evaluation.

1. *List of Business Reuse Programs to Research*

The Contractor consulted SWMCB and Minnesota Technical Assistance Program staff and the following websites to create a list of over 100 business reuse programs to research:

- A worldwide material exchange directory provided by Recycler's World at www.recycle.net/recycle/exch/.
- A list of North American waste exchanges provided by King County in the Seattle, Washington area at www.metrokc.gov/hazwaste/imex/others.html.
- A list of material exchanges in the United States and Canada provided by the Southern Waste Information Exchange, Inc. (SWIX) at www.wastexchange.org/exchanges/top_list.cfm.

With the direction of SWMCB staff, the Contractor narrowed down its research list based on the following criteria:

- Delete Minnesota programs.
- Delete programs dealing strictly with industrial waste.

- Delete all state programs outside of Minnesota except well-known programs such as Indiana, Iowa, California, etc.
- Delete all international programs except Canadian programs.

After the Contractor applied these selection criteria, the following 55 business reuse programs remained on its research list:

1. Alberta Waste Materials Exchange
2. Association for Resource Conservation
3. Atlantic Coastal Action Program (ACAP)
4. British Columbia Materials Exchange
5. Business Material Exchange of Wisconsin
6. By-Products & Waste Search Service
7. California Materials Exchange (CalMAX)
8. Cal-MEX (operated by CalMAX)
9. City of Deerfield Beach
10. Colorado Materials Exchange
11. Commercial Materials Exchange
12. Durham Region (Ontario) Waste Exchange
13. ECO-WIN (Ontario)
14. EMATCH (formerly SCRAPMATCH of Arkansas)
15. Essex-Windsor (Ontario) Waste Exchange
16. Hudson Valley (NY) Materials Exchange
17. Indiana Materials Exchange
18. Industrial Materials Exchange (King County, Seattle, WA)
19. Inter-Continental Paper Exchange
20. Inter-Continental Waste Exchange (IWE)
21. Inter-Continental Wood Exchange
22. Iowa Waste Exchange
23. Kentucky Industrial Materials Exchange
24. KidMAX for California's Schools
25. Louisiana/Gulf Coast Waste Exchange
26. Massachusetts Material Exchange
27. Millenium (Maryland)
28. Morris County MUAs Material Exchange Program
29. Napa County Materials Exchange Program (NapaMAX of California)
30. New Hampshire Materials Exchange
31. Ohio Materials Exchange
32. Ontario Waste Materials Exchange
33. Printing Equipment Exchange
34. Reusable Building Materials Exchange (WA)
35. Rivanna Solid Waste Authority Exchange Program
36. Rocky Mountain Material Exchange (CO)
37. Quebec Waste Materials Exchange
38. Santa Cruz County Materials Exchange Program (ProMAX of California)

39. Saskatchewan Waste Materials Exchange
40. Shasta County Materials Exchange Program (ShastaMAX of California)
41. Solid Waste Authority of Central Ohio
42. South Dayton Waste Exchange (OH)
43. Southeast Waste Exchange (NC)
44. Southern New England Materials Exchange
45. Southern Waste Information Exchange, Inc. (SWIX)
46. Southwest Materials Exchange
47. Surplus Exchange, Inc.
48. Transcontinental Materials Exchange
49. Ventura County Materials Exchange Program (VCMAX of California)
50. Vermont Business Material Exchange
51. Washoe County Materials Exchange Network (NV)
52. Wastelink
53. Western New York Materials Exchange
54. Xerox
55. 3M Resource Recovery

2. Questionnaire to Interview Business Reuse Program Staff to Profile Programs Based on Preliminary Information

To interview business reuse program staff and obtain preliminary program information, the Contractor developed a questionnaire to obtain the following key information (see Appendix A):

- Type of organization (e.g., private, nonprofit, etc.)
- Structure and focus of program
- Area/region(s) served
- Years of operation
- Annual operating budget
- Sources of start-up and ongoing funding
- Number of exchanges per year
- Tons of materials diverted per year

The Contractor was unable to interview staff from 31 business reuse programs on its research list due to:

- The inability to reach program staff. The Contractor left multiple voicemail messages for program staff that were not returned.
- The programs that were no longer in existence. Many programs listed on the Internet no longer exist. For example, only one of eight Canadian programs identified is still operating.

The Contractor used the preliminary information collected to profile 24 of the business reuse programs interviewed (see Appendix B).

3. Selection Criteria and Recommended Programs for Additional Research and Evaluation

Based on the preliminary business reuse program information gathered, the Contractor developed the following selection criteria to recommend programs for additional research and evaluation:

- Number of years of program operation.
- Type(s) of organization(s) administering the program (e.g., private, non-profit or a unique partnership).
- Program partner(s) positioned to promote economic development among the business community.
- Program staff providing active assistance to businesses.
- Cost-effectiveness of the program (measured by cost/ton of materials diverted).

The Contractor recommended the following 11 programs for additional research and evaluation to SWMCB staff (see Appendix C):

1. ECO-WIN (Ontario)
2. EMATCH of Arkansas (formerly SCRAPMATCH)
3. Indiana Materials Exchange (IMEX)
4. Iowa Waste Exchange (IWE)
5. Massachusetts Material Exchange (MME)
6. New Hampshire Materials Exchange
7. Ohio Materials Exchange (OMEx)
8. Santa Cruz County Materials Exchange Program (ProMAX of California)
9. Solid Waste Authority of Central Ohio
10. Southern Waste Information Exchange, Inc. (SWIX)
11. Vermont Business Material Exchange

After discussion with SWMCB staff, the following three programs were deleted from the recommended research list:

1. EMATCH (formerly SCRAPMATCH of Arkansas)
2. New Hampshire Materials Exchange
3. Solid Waste Authority of Central Ohio

While EMATCH is an excellent example of a business reuse program positioned to promote economic development among the business community, the number of program staff have been significantly reduced, and the remaining staff have limited historical knowledge of the program. Even though New Hampshire is positioned to work with businesses as a nonprofit organization, the program diverts only 300 tons of material per

year. The Solid Waste Authority of Central Ohio is a local program that focuses on large businesses generating 50 percent of the local waste stream. However, it is a completely passive program operating solely through online listings.

B. Research, Evaluate and Rank Selected Programs

The second phase of the project was to:

- Conduct additional research and report on selected programs.
- Evaluate and rank selected programs.

1. *Additional Research and Report on Selected Programs*

To conduct additional research on selected business reuse programs, the Contractor:

- Developed a questionnaire to obtain detailed program information from program staff (see Appendix D).
- Conducted follow-up phone interviews.

A report on the information the Contractor acquired for seven selected programs is provided in Appendix E. The Contractor was not able to interview ECO-WIN program staff in Ontario. Because program staff were focused on serving their customers, they were not available for additional interviewing.

2. *Evaluate and Rank Selected Programs*

Based on the detailed information gathered on seven selected programs, the Contractor believes that the following four business reuse programs are currently the most successful programs researched:

1. Indiana Materials Exchange (IMEX)
2. Iowa Waste Exchange (IWE)
3. Ohio Materials Exchange (OMEx)
4. Southern Waste Information Exchange, Inc. (SWIX)

Of the business reuse programs researched, the Contractor did not find a successful program that serves a small jurisdiction similar to the SWMCB region. The Indiana, Iowa and Ohio programs are statewide programs. SWIX is a regional program that serves EPA Region 4 comprised of eight states (Florida, Georgia, North and South Carolina, Alabama, Mississippi, Tennessee and Kentucky).

The Contractor chose these four successful programs based on the following criteria:

- **Number of years of program operation**

Indiana: 11 years

Iowa: 10 years

Ohio: 2 years (spin-off of Indiana program)

SWIX: 19 years

- **Program administered by an organization positioned to work with businesses (e.g., non-government agency or government agency that works specifically with businesses)**

Indiana: Public, private partnership

Program is administered by Waste Alternatives, Inc., a private company under contract with the Indiana Department of Environmental Management.

Iowa: Public, nonprofit partnership

Program is administered by Iowa Department of Economic Development. Technical services are provided by the University of Iowa.

Ohio: Public, private, nonprofit partnership

Program is administered by Waste Alternatives, a private company under contract with the Association of Ohio Recyclers (nonprofit). Other program partners via funding and in-kind services are the Ohio Department of Development, the Ohio Department of Natural Resources and the Ohio EPA.

SWIX: Nonprofit

The program is a nonprofit corporation, which is a cooperative effort among the Florida Chamber of Commerce, Florida State University and the Florida Department of Environmental Protection.

- **Positioned to Promote Economic Development**

Indiana: None

Iowa: Program is administered by the Iowa Department of Economic Development.

Ohio: A program partner is the Ohio Department of Development.

SWIX: A program partner is the Florida Chamber of Commerce.

- **Active programs with experienced staff to facilitate matches**

Indiana: A broker/recycler on staff facilitates matches.

Iowa: Eleven waste exchange resource specialists facilitate matches.

Ohio: A broker/recycler on staff facilitates matches.

SWIX: An environmental engineer on staff facilitates matches.

- **Program promotion positioned to be visible to businesses**

All four programs maximize their opportunities to be visible to businesses through:

Trade shows
Business associations
Chamber of commerce memberships
Business magazines

- **Cost-effectiveness of the program (measured by cost/ton of materials diverted)**

Indiana: \$1.93/ton

Iowa: \$2.27/ton

Ohio: \$2.30/ton

SWIX: \$5.32/ton

- **Program visibility to supporters**

These four programs are more successful in maintaining visibility of effort and success to their funding sources and other interested parties.

Examples of techniques include:

Sending newsletters and catalogs to all partners, key legislators, chambers of commerce and trade associations.

Conducting presentations at conferences and trade associations.

Securing business magazine sponsorships.

Looking for ways to generate income from exchanges (e.g., generate advertising revenue).

3. Request for Additional Information

In response to a request by SWMCB staff, the Contractor obtained the following additional information about these four successful programs:

- The top three to five materials that constitute the largest number of tons diverted.
- Whether or not MSW is a priority waste diverted by these programs.
- The size of the waste stream that these programs operate within.
- The percentage of the waste stream that these programs divert.
- The types of businesses that are in the region that these programs serve.

A summary of this additional information is provided in Appendix F.

III. BUSINESS ROUNDTABLE DISCUSSION

The third phase of the project was to assist SWMCB staff in conducting a Business Roundtable Discussion on August 29, 2000 to solicit feedback from the business community on the willingness to use various reuse methods. The discussion was organized and facilitated by SWMCB staff, and the Contractor:

- Assisted in the development of discussion questions.
- Took notes during the discussion.

A. Business Roundtable Discussion Questions

Nine representatives from the business community in the SWMCB region participated in the Roundtable Discussion. Each representative received the following discussion questions prior to the meeting (see Appendix G):

1. Would you use a business reuse program to dispose of materials and/or to obtain materials?
2. What type of organization would you be most comfortable working with to facilitate the reuse of materials? Examples include private, nonprofit, public or a partnership among these types of organizations.
3. Would you be willing to pay a fee for a business reuse service? If so, how much do you think is appropriate?
4. Where would you be most likely to look for information about a business reuse program?
5. What type of assistance would you like to receive to participate in a business reuse program?
6. What would prevent you from participating in a business reuse program?
7. What types of materials does your business generate that could be part of a business reuse program?

B. Results of the Discussion

A complete set of notes taken by the Contractor during the Business Roundtable Discussion is provided in Appendix H. Highlights of the discussion follow:

1. Meeting participants indicated that they have used business reuse programs to discard and to obtain materials. However, they expressed concerns about health

- restrictions, vendor limitations and liability issues. The concerns about liability issues were of great importance among meeting participants.
2. Meeting participants indicated that they would want help to facilitate exchanges from a nonprofit or an organization that is under contract to a government entity. One company indicated that they would not want help from a government organization.
 3. Meeting participants were divided between those that would and would not pay a fee. It appears that those who would not pay a fee are hazardous waste generators that are already subject to state licenses and fees.
 4. To reach CEO's and executives, the members of the group suggested advertising in the business section of the newspaper (e.g., page B1 of the Star Tribune) and in local business magazines (e.g., City Business and Twin Cities Business Monthly). To target the operations departments, group participants recommended advertising in any publication related to operations such as trade organizations and manufacturers alliance newsletters, advertising when fees are paid to renew any business permit and in the Yellow Pages.
 5. Group participants indicated that they would like to receive active assistance from business reuse program staff in reviewing the materials listed and working with them to make matches. Participants would like more useful listings such as listings with digital pictures and listing materials as if they were commodities rather than materials (e.g., listing plastic bags as plastic film and cross-referencing listings accordingly). Finally, participants requested that the program be structured so that it is easy for businesses to participate. They do not have time to research how to participate in these programs.
 6. Meeting participants indicated that the barriers to participation are: (a) liability; (b) minimum volume requirements per exchange; (c) consistent quality and quantity of materials; (d) the logistics of timing supply and demand for materials; (e) materials meeting specifications; (f) the operational cost of storing, separating and transporting materials; and (g) the inability to develop long-term relationships with business reuse program technical staff.
 7. Members of the group indicated that they generate a wide range of MSW and hazardous and non-hazardous industrial materials that could be part of a business reuse program.

IV. CONCLUSION

Based on research and the results of the Business Roundtable Discussion, the Contractor concluded its work by:

- Evaluating the four successful business reuse programs based on SWMCB's evaluation criteria set forth in the Request for Proposals.
- Developing recommendations for a new business reuse program.
- Recommending a model business reuse program for the SWMCB region.

A. SWMCB Evaluation Criteria from the Request for Proposals

The Contractor evaluated the four successful business reuse programs, Indiana, Iowa, Ohio and SWIX, using the seven criteria set forth in the Request for Proposals:

1. Greatest tonnage or volume of materials reused
2. Least cost per ton
3. Greatest variety of materials reused
4. Greatest opportunity for waste stream toxicity reduction
5. Least amount of program administration
6. Fewest barriers/challenges
7. Business preferences

1. *Greatest Tonnage or Volume of Materials Reused*
2. *Least Cost per Ton*

Program	Iowa Waste Exchange	Indiana Materials Exchange	Southern Waste Information Exchange, Inc.	Ohio Materials Exchange
Years of Operation	10	11	19	2 ¹
Service Area	State of Iowa	State of Indiana	Eight states: Florida, Georgia, North and South Carolina, Alabama, Mississippi, Tennessee, and Kentucky	State of Ohio
Annual Budget	\$400,000	\$200,000	\$500,000	\$95,000 plus publication costs
Annual Tons Diverted²	176,006 (FY 2000)	103,382 (1999)	94,000 (1999)	40,906 (1999)
Cost per Ton³	\$2.27/ton	\$1.93/ton	\$5.32/ton	\$2.30/ton
Exchanges per Year	649 in FY2000	315 in 1999	200-300 per yr. for last ten years	405 in 1999

¹Program is a spin-off of the Indiana program.

²These numbers may or may not include tonnage for ongoing exchanges taking place between businesses without the involvement of the program.

³Contractor calculated cost per ton using annual budget and annual tons diverted.

3. *Greatest Variety of Materials Reused*

The four successful business reuse programs do not specifically target the greatest variety of materials reused nor do they track this information.

4. *Greatest Opportunity for Waste Stream Toxicity Reduction*

The four successful business reuse programs do not specifically target materials to reduce the toxicity of the waste stream.

5. *Least Amount of Program Administration*

Because the four successful business reuse programs are structured and administered differently, it was not possible to compare program administration. Annual budgets and funding sources are provided below:

Program	Iowa Waste Exchange	Indiana Materials Exchange	Southern Waste Information Exchange, Inc.	Ohio Materials Exchange
Annual Budget	\$400,000	\$200,000	\$500,000	\$95,000 plus publication costs
Funding Sources	\$300,000 is State grant from landfill fees \$100,000 is in-kind and cash from sponsors	State of Indiana	\$300,000 in State grant funds \$200,000 in Federal and State agency grants and industry sponsors	State of Ohio

6. *Fewest Barriers/Challenges*

All four of the successful business reuse programs have been changed or modified over the years to address barriers. These modifications have included changes in organizational structure and/or changes in funding. (See examples under Flexibility on Page 17).

7. *Business Preferences*

The four successful business reuse programs do not target specific business sectors.

B. Recommendations for a New Business Reuse Program

The Contractor's recommendations for a new business reuse program include:

1. The key strategy for the program.
2. Three business reuse program models that may be considered when developing a new program.
3. Important characteristics of the new program.

1. *The Key Strategy for the Program*

The key strategy for the program is to promote reuse as disposal and procurement cost reduction opportunities for businesses with the added value of waste reduction for the SWMCB region.

2. *Program Options*

Two options may be considered when developing a new business reuse program to serve the SWMCB region:

- Develop a new program in a private or nonprofit organization to operate under a contract for service with the characteristics described below.
- Outsource the provision of business reuse program services (outreach, awareness, advertising, database management and information dissemination) to an established private or nonprofit business reuse program in Minnesota or in another state. The program should exhibit the characteristics listed below.

3. *Important Characteristics of the New Program*

The Contractor recommends that the new business reuse program exhibit three types of characteristics:

- a) Organizational characteristics
- b) Positioning characteristics
- c) Operational characteristics

Details of these characteristics are provided below.

a) Organizational Characteristics

Private or Nonprofit Sector

Locate the program in the private or nonprofit sector to keep administrative costs low, to position it to receive funding from a variety of sources including advertising revenues, corporate sponsorships and grants, and to effectively interface with the business community.

Businesses at the Roundtable Discussion indicated that they would prefer to receive help on facilitating exchanges from a nonprofit or an organization that is under contract to a government agency. One company indicated that they would not want help from a government organization. None of the four successful business reuse programs interviewed are located in government or quasi-government agencies. However, all of these programs rely on government funding for financial support.

Economic Development Strategies

Recruit economic development professionals such as the Department of Commerce, the Department of Trade and Economic Development, and Chambers of Commerce to promote the program as an economic development strategy for the business community. For example, the Iowa program is administered by the Iowa Department of Economic Development, the Ohio Department of Economic Development is a partner in the Ohio program and the Florida Chamber of Commerce supports the SWIX program.

Put Business Needs First

Assist businesses in exchanging the types of materials they want to exchange rather than focusing on the MSW stream.

Meet the needs of business first to integrate the reuse concept into their daily operations and corporate culture. Once the reuse concept is integrated, focus businesses on the reuse of materials from the MSW stream. While many of the materials exchanged between businesses are heavy weight materials, such as foundry sand and slag, these same businesses will always have MSW to exchange as well. A program focused on MSW reduction alone will have a narrow base of businesses to work with.

Flexibility

Set up the new program with a flexible structure and leaders who understand and value the need to continually reposition the program to remain viable. All the successful business reuse programs interviewed for this project repositioned themselves to become more successful as they matured. Some changed their organizational structure and others changed their funding sources.

For example, Florida State University started the SWIX program in 1981. Fifteen years later, a new nonprofit organization was formed to facilitate public/private partnerships, eliminate the high overhead costs associated with operating in a university setting and to expand its funding options such as receiving advertising revenue. The co-sponsors of this new 501 C3 are the Florida Chamber of Commerce, the Florida Department of Environmental Protection and Florida State University.

The Indiana Materials Exchange was operated by the Indiana Department of Environmental Management (IDEM) for seven years. Since 1996, IDEM has contracted with Waste Alternatives, a private company, to operate the program.

The Ohio Materials Exchange, a spin-off of the Indiana program, consists of a public, private, nonprofit partnership. The program is administered by Waste Alternatives, a private company under contract with the Association of Ohio Recyclers (nonprofit). Other program partners via funding and in-kind services are the Ohio Department of Development, the Ohio Department of Natural Resources and the Ohio EPA.

b) Positioning Characteristics

Positioned to be Proactive

Take a proactive approach to business and position program staff to develop long-term working relationships with businesses. The Iowa program has 11 Waste Exchange Resource Specialists assigned to cover specific geographic areas of the state. Other programs have technical expertise on staff who work directly with businesses to facilitate exchanges. The Indiana program has a staff person who is a broker/recycler by trade and provides technical assistance to make matches. The SWIX program has an environmental engineer, with experience in environmental compliance, to help facilitate exchanges.

Positioned for Program Visibility

Use sales and marketing techniques to obtain maximum visibility for the program. Do not wait for businesses to call program staff with inquiries. For example, use different strategies for different target audiences.

Advertise/Educate: Promote the program at trade shows, business associations, Chambers of Commerce, etc. Advertise the program in the business sections of the newspaper, business magazines, the Yellow Pages, through links to other web sites and with the assistance of Minnesota Waste Wise. Enlist hazardous waste and food safety inspectors to promote the program during site inspections.

Facilitate Exchanges: Develop an approach to publicize the materials available or wanted that best meets the needs of the businesses being served. Because paper catalogs are often out of date as soon as they are published, consider using a cheaper/smaller newsletter publication to supplement listings on a website.

Inform Key Supporters: Keep key supporters (e.g., elected officials, leaders in the business community, corporate sponsors and funding sources) aware of the program on a regular basis by providing them with copies of the information sent to businesses and materials summarizing results.

Positioned for Strategic Partnerships

Form strategic partnerships with private sector organizations, (e.g., Chambers of Commerce, trade organizations, etc.) to encourage proactive outreach. For example, the SWIX program is co-sponsored by the Florida Chamber of Commerce, the Florida Environmental Protection Agency and Florida State University. Iowa's program is administered by the Iowa Department of Economic Development, technical services provided by the University of Iowa, and the 11 Waste Exchange Resource Specialists are employed by the Iowa Community Colleges, the Councils of Government, and an economic development center.

c) Operational Characteristics

Hazardous Materials Exchanges

Develop strategies to simplify the exchange process for companies that utilize hazardous materials. There are more costs involved in disposing of hazardous wastes so the cost savings could be substantial if these materials were diverted. There is also more liability in exchanging these materials so the match-ups for reuse may require more staff time and be more expensive to complete.

Commodities Approach

Position the program to market materials available and wanted for exchange as raw materials or commodities not only as their current form or use. For example, market plastic bags as plastic film and cross-reference the listings accordingly.

Meaningful Performance Measures

Monitor program performance using meaningful measures that focus on program activities in addition to less reliable measures, such as tons of materials diverted and numbers of exchanges. Develop a system of Primary (readily quantifiable) and Secondary (less reliable) Performance Measures.

Primary Performance Measures:

Outreach Contacts: Measure program performance based on the number of outreach contacts with businesses made by staff to promote the program, identify materials to be exchanged and to facilitate exchanges.

Inquiries to Program: Measure program performance based on the number of inquiries made to the program for general information or for specific information about materials available for exchange.

First-Time Exchanges: A very important performance measure is the number of first-time exchanges that are completed. The continuation of these successful exchanges is usually done by the businesses without additional involvement from and measurement by the program.

Secondary Performance Measures:

Tons of Materials Diverted: Additional information may be collected about the weight (tons) of materials exchanged during a specified time period. The mechanisms to collect this information—phone calls, mail surveys and e-mail—are cumbersome, and the data may be unreliable. While this information may be interesting, the successful programs interviewed do not rely solely on this these types of data to gauge the success of their programs.

Creative Funding Approaches

Funding for the program should be considered in two phases, start-up and ongoing.

Start-Up Funding

Start-up funding should be adequate to develop the program and bring it to the point where it can receive ongoing funding. The program should be structured in a way that maximizes the ongoing funding sources available. The start-up funding for the four business reuse programs interviewed are summarized below:

Program	Start-Up Funds and Sources
Indiana Materials Exchange	State funds based on 1988 legislative mandate. Start-up amount not available.
Iowa Waste Exchange	U.S. EPA grant. Start-up amount not available.
Ohio Materials Exchange	\$50,000 from Ohio Environmental Education, \$15,000 from Ohio Department of Development, \$30,000 in-kind from Ohio EPA for web site and catalog publication
Southern Waste Information Exchange, Inc.	State funds Start-up amount not available.

Ongoing Funding

The four successful business reuse programs interviewed were heavily dependent on state funding. These programs and most of the other programs interviewed identified ongoing funding as their major challenge. All of the programs

indicated they were exploring ways to raise as much money as possible through program operations in order to reduce their dependency on outside funding. The ongoing funding for the four business reuse programs interviewed are summarized below:

Program	Ongoing Funding and Sources
Indiana Materials Exchange	\$200,000 State funds
Iowa Waste Exchange	\$400,000 \$300,000 state funds \$100,000 in-kind match for grants from partners
Ohio Materials Exchange	\$95,000 plus publication costs \$25,000 Ohio Dept. of Development \$5,000 Ohio Dept. of Natural Resources \$30,000 in-kind from Ohio EPA for website and catalog publication In-kind services from Waste Alternatives, Inc. while in the process of fund-raising.
Southern Waste Information Exchange, Inc.	\$500,000 \$300,000 state funds \$200,000 funding from federal and state agencies and industry sponsorships

Funding Options

A long-term goal for the program is to reduce dependency on outside funding. This may require a creative approach to mix multiple funding streams and sources to meet funding needs. Options considered or used by other business reuse programs interviewed include:

- Charging a percentage fee on each exchange which may be a percentage of the avoided disposal cost or of the purchase value of the materials being exchanged.
- Charging a fixed fee per exchange.
- Charging a membership fee to be involved in the business reuse program.
- An association or trade group might pay for the provision of business reuse services for its members.

- A local government might pay for the provision of business reuse services for the businesses in its area.
- Charging fees for advertising space in catalogs and on the web site.

Business-Oriented Staff

The most successful business reuse program staff are those who have worked in a business-to-business setting. While most of the activities in a business reuse program are in the marketing and sales area, it is critical to have technical support staff available to work with businesses to facilitate exchanges. Current program staff for the successful programs interviewed are described below:

Program	Staff
Indiana Materials Exchange	Contract with Waste Alternatives, Inc. = 1.5 FTE's for Exchange Coordinator, Broker/recycler technical support and administrative and website management support staff
Iowa Waste Exchange	Program Manager = 0.5 FTE 11 Waste Exchange Resource Specialists = 8 FTE's
Ohio Materials Exchange	Contract with Waste Alternatives, Inc. = 1.5 FTE's for Exchange Coordinator, Broker/recycler technical support and administrative and website management support staff
Southern Waste Information Exchange, Inc.	3 FTE's for Business Manager, Environmental Engineer and two graduate students

C. A Model Business Reuse Program for the SWMCB Region

The potential for success of a business reuse program in the SWMCB region is excellent. There is a large geographic concentration of businesses in the Twin Cities and surrounding communities. Many of these businesses have a commitment to pursue environmentally sound waste management practices with waste reduction and recycling programs already in place within their organizations. These same businesses should be very good candidates for participating in a business reuse program.

Based on the review of the successful business reuse programs around the country, it is clear that the structure of these programs is very different from the way business reuse services have been offered in the Twin Cities metropolitan area in the past. The Contractor recommends these guiding principals for the new program:

- Locate the program in the right organization.
- Maximize staff time spent interfacing with businesses.
- Minimize staff time working on administrative issues.

Recommended Model

Based on the organizational, positioning and operational characteristics of a business reuse program included in this report, the Contractor recommends the following model business reuse program for the Twin Cities metropolitan area:

1. *Locate the new business reuse program in an existing Twin Cities private or nonprofit organization already positioned to work with businesses.*

This existing private or nonprofit organization would have administrative services and structure already in place, which would allow program staff to concentrate on program development. The organization should have the following characteristics:

a) Organizational Characteristics

- Integrate economic development strategies into their work.
- Know how to put business needs first.
- Be flexible to continually reposition the program to remain viable.

b) Positioning Characteristics

- Develop long-term working relationships with businesses.
- Take a sales and marketing approach for maximum program visibility.
- Have local strategic partnerships already in place.

c) Operational Characteristics

- Take a commodities approach to materials listings.
- Simplify hazardous materials exchanges.

2. *Contract with an outside organization for business reuse infrastructure services.*

Services for the business reuse program infrastructure, such as, catalog publication and updating, fax-on-demand services to receive information on materials wanted and available, and website management, can be provided by an experienced outside

contractor which would allow program staff to concentrate on program development. These services are standardized, and the service contract can be increased, as more services are needed.

a) Examples of Organizations

Examples of private and nonprofit organizations that might manage the new business reuse program are:

- Trade organizations (manufacturers, industrial, etc.).
- Business magazine publishers (Corporate Report, Twin Cities Business Monthly, etc.).
- Environmental organizations already positioned to work with businesses (Minnesota Environmental Initiative, Minnesota Center for Environmental Advocacy, etc.).
- Chambers of Commerce (Minnesota Chamber, Twin West Chamber, etc.).

Program Cost Estimate

Public money will be the key to funding the model business reuse program, and potential funding sources are the SWMCB and the State of Minnesota. Funding for the program should be considered in two phases, start-up and ongoing. The Contractor estimates that it will cost up to \$100,000 for program start-up, estimated to be six months in duration. Ongoing funding is estimated at \$250,000 per year including the contract for service.