

CHELSEA CENTER FOR RECYCLING AND ECONOMIC DEVELOPMENT

UNIVERSITY OF MASSACHUSETTS

## **Technical Report #5**

### **Electronics Recycling Vendor Survey**

**August 1998**



# **Electronics Recycling Vendor Survey, 1998**

William Waters  
Product Takeback Services

## **Chelsea Center for Recycling and Economic Development**

August 1998

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The Chelsea Center for Recycling and Economic Development, a part of the University of Massachusetts' Center for Environmentally Appropriate Materials, was created by the Commonwealth of Massachusetts in 1995 to create jobs, support recycling efforts, and help the economy and the environment by increasing the use of recyclables by manufacturers. The mission of the Chelsea Center is to develop an infrastructure for a sustainable materials economy in Massachusetts, where businesses will thrive that rely on locally discarded goods as their feedstock and that minimize pressure on the environment by reducing waste, pollution, dependence on virgin materials, and dependence on disposal facilities. Further information can be obtained by writing the Chelsea Center for Recycling and Economic Development, 180 Second Street, Chelsea, MA 02150.

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# Vendor Surveys

## Demanufacturers

**Company Name :** Absolute Recycling  
**Address:** 9 Sawmill Rd.  
West-Haven, CT 06516

**Specialty:** Full-service recycler  
**Contact Name :** Roseanne Cristofano  
**Phone:** (203) 932-2422  
**Fax:** (203) 932-3595

**Capacity:** 15,000 tons/mo.

**Employment:** 45

**Transportation Available:** Yes

### **Products Handled:**

**Plastics**  
**CRT's/Televisions**  
**CPU's**  
**Circuit Boards**  
**Appliances**

**Disposition Paths**  
Recycle/Landfill  
Resale/Smelting/Recycling  
  
Landfill

**By-product**  
Mixed Housings/Single resin granules  
Sorted glass cullet

**Comments:** Absolute Recycling handles all types of materials ranging from paper to pallets to used electronics. While they appear to be able to demanufacture and sort the incoming electronics, they have difficulty with mixed plastics.

\* \* \* \* \*

**Company Name:** Allied Computer Brokers  
**Address:** 60 Railroad St.  
Bradford, MA 01835

**Specialty:** Full service electronic  
recycling and resale  
**Contact Name:** Rick Nicolosi  
**Phone:** (978) 521-5919  
**Fax:** (978) 521-5918

**Capacity:** 300 tons/mo.

**Employment:** 15

**Transportation Available:** Yes

### **Products Handled:**

**Plastics**  
**CRT's/Televisions**  
**CPU's**  
**Circuit Boards**  
**Appliances**

**Disposition Paths**  
Recycle/Export  
Resale/Lead Smelting  
Resale/Demanufacture  
Chip Removal/Recycling  
Recycling

**By-product**  
Bales of Mixed Plastics  
Intact Monitors  
  
Chips/Precious Metals  
Scrap Metal

**Comments:** Allied has recently broken into two entities, Allied Computer Brokers, which concentrates on resale and ACB Electronics Recycling, which concentrates on the recycling end. They are investing in grinders and smelting equipment in order to provide full-service recycling of electronics at their Bradford site.

**Company Name:** Computer Assets  
**Address:** 250 Eliot St.  
Clinton, MA

**Specialty:** Transfer station for  
electronic goods  
**Contact Name:** Vinnie Di Rodi  
**Phone:** (508) 881-4422  
**Fax:** (508) 881-4922

**Capacity:** 80 tons/mo.

**Employment:** 5

**Transportation Available:** Yes

**Products Handled:**

Plastics  
CRT's/Televisions  
CPU's  
Circuit Boards  
Appliances

Disposition Paths

Recycle  
Resale/Lead smelting  
Resale/Demanufacture

By-product

Containers of mixed plastic housing  
Intact TV's

**Comments:** Computer Assets is not a processor of electronic goods. Instead, they pick up material from companies, sort it and send it on to brokers for resale or recyclers for disposition.

\* \* \* \* \*

**Company Name:** Computer Recycling & Refining  
**Address:** 27 Ciro St.  
Branford, CT

**Specialty:** Computer Recycling  
**Contact Name:**  
**Phone:** (203) 488-0535  
**Fax:**

**Capacity:** 50

**Employment:** 4

**Transportation Available:** Yes

**Products Handled:**

Plastics  
CRT's/Televisions  
CPU's  
Circuit Boards  
Appliances

Disposition Paths

Landfill  
Export  
Demanufacture  
Recovery of precious metals

By-product

Mixed plastic housings  
Intact  
Precious metals

**Comments:** While CR&R bills itself as a complete computer recycler, they have not dealt with finding markets for their plastics or CRT's. Their capability is primarily demanufacture precious metal recovery.

**Company Name:** Community Resource Management  
**Address:** 20 Union St.  
Lynn, MA 01904

**Specialty:** Job Training through Recycling  
**Contact Name:** John Chapman  
**Phone:** (781) 598-6003  
**Fax:** (781) 598-6003

**Capacity:** 6 tons/mo.

**Employment:** 10

**Transportation Available:** Yes

**Products Handled:**

	<u>Disposition Paths</u>	<u>By-product</u>
Plastics	Recycle	Granulated plastics
CRT's/Televisions	Resale/Export	Intact CRT's
CPU's	Resale/Demanufacture	Intact Precious Metals/Chips
Circuit Boards	Recycling	Precious metals/Chips
Appliances	Recycling	Scrap metals

**Comments:** Community Resource Management's primary focus is on putting the jobless to work through job training. They handle all sorts of material, but their recycling capability is restricted.

\* \* \* \* \*

**Company Name:** DMC  
**Address:** 16 Swampscott St.  
Newfields, NH 03856

**Specialty:** Electronic Recycler  
**Contact Name:** Mike Magliaro  
**Phone :**(603) 772- 7236  
**Fax:** (603) 772-5420

**Capacity:** 866 tons/mo.

**Employment:** 26

**Transportation Available:** No

**Products Handled:**

	<u>Disposition Paths</u>	<u>By-product</u>
Plastics	Incineration	Mixed plastic housings
CRT's/Televisions	Resale/Smelting	Glass silica for smelting
CPU's	Resale/Demanufacture	
Circuit Boards	Chip Removal/Precious metal recovery	Precious metals
Appliances	Recycling	Scrap metals

**Comments:** DMC has one of the most complete recycling processes in New England handling all aspects of CRT and CPU recycling. However, they are not interested in providing transportation from the towns to DMC.

**Company Name:** Electronic Disposal & Recycling Inc.  
**Address:** 8C Tinkham Ave  
 Decry, NH 03038

**Specialty:** Complete Electronics Recycling  
**Contact Name:** Roland Eastman  
**Phone:** (603) 437-3370  
**Fax:** (603) 437-2993

**Capacity:** 1000 tons/mo.                      **Employment:** 10                      **Transportation Available:** Yes

**Products Handled:**

	<u>Disposition Paths</u>	<u>By-product</u>
Plastics	Incineration/Export	Mixed plastic granules
CRT's/Televisions	Lead Smelting/Recycling	Glass cullet
CPU's	Demanufacture	
Circuit Boards	Precious Metal Recovery	Precious metals
Appliances	Recycling	Scrap metals

**Comments:** EDR may be an important vendor in the future. While their processes are not very developed at this point, the owner has a vision for a turnkey processing facility that will handle huge volumes of electronics. He is also working on end markets for CRT's and plastics that I could offer substantial revenue for the byproducts.

\*   \*   \*   \*   \*   \*

**Company Name:** Electronic Processing Associates  
**Address:** 133 Congress St.  
 Lowell, MA 01852

**Specialty:** Electronic Demanufacturing  
**Contact Name:** Jim Maher  
**Phone:** (978) 970-2700  
**Fax:** (978) 970-3700

**Capacity:** 400 tons/mo.                      **Employment:** 9                      **Transportation Available:** Yes

**Products Handled:**

	<u>Disposition Paths</u>	<u>By-product</u>
Plastics	Incineration/Recycling	Mixed plastics
CRT's/Televisions	Resale/Smelting	Bare CRT's
CPU's	Demanufacture	
Circuit Boards	Precious metal recovery	Precious metals
Appliances		

**Comments:** EPA, Inc. is a full service recycler processing CPU's and CRT's. They perform demanufacturing at their facility in Lowell and send the circuit boards to their parent company, Colt Refining to be refined. While they no longer process CRT's themselves, they are sending all of their monitors and TV sets to a company in Ohio that is washing the glass and recycling it back into CRT's. EPA 's New Jersey facility is handling the Union County program for the EPA.

**Company Name:** Electronic Recovery Group  
**Address:** 12 Continental Drive  
Merrimack, NH

**Specialty:** Computer Recycler/Broker  
**Contact Name:** Bob Dampolo  
**Phone:** (603) 424-9092  
**Fax:** (603) 424-9093

**Capacity:** 150 tons/mo.

**Employment:** 10

**Transportation Available:** No

**Products Handled:**

	<u>Disposition Path</u>	<u>By-product</u>
Plastics	Incineration	Mixed plastic housings
CRT's/Televisions	Resale/Recycling	Intact CRT's
CPU's	Demanufacture	
Circuit Boards	Chip removal/Precious metal recovery	Precious metals

**Appliances**

**Comments:** ERG offers complete recycling services, although they do not provide plastic recycling or CRT processing on site. Therefore their value is primarily in resale and sorting product before it is sent to other processors.

\* \* \* \* \*

**Company Name:** Envirocycle  
**Address:** P.O. Box 899  
Hallstead, PA 18822

**Specialty:** Asset Management w/CRT specialty  
**Contact Name:** Greg Voorhees  
**Phone:** (800) 711-6015  
**Fax:** (717) 879-2008

**Capacity:** 6000 tons/mo.

**Employment:** 130

**Transportation Available:** Yes

**Products Handled:**

	<u>Disposition Paths</u>	<u>By-product</u>
Plastics	Recycling/Export	Granulated plastics
CRT's/Televisions	Resale/Recycling	Intact Monitors/Sorted glass cullet
CPU's	Resale/Demanufacture	Intact CPU's Precious metals
Circuit Boards	Resale/Recycling	Precious metals
Appliances	Recycling	Scrap metals

**Comments:** Envirocycle appears to have the most complete CRT recycling program of anyone in the Northeast, providing glass-to-glass recycling back into new CRT's. However, their process is expensive and the transportation costs to their site will be high.



**Company Name:** Reclamation Technologies  
**Address:** 55 Green St.  
Portsmouth, NH 03801

**Specialty:** Product Resale  
**Contact Name:** Tom Manero  
**Phone:** (603) 433-2223  
**Fax:** (603) 433-1575

**Capacity:** 50 tons/mo.

**Employment:** 16

**Transportation Available :** Yes

**Products Handled:**

	<u>Disposition Paths</u>	<u>By-product</u>
Plastics	Recycle	Mixed plastic housings
CRT's/Televisions	Resale/Recycle	Intact CRT's
CPU's	Resale/Demanufacture	
Circuit Boards	Chip removal/Precious metals	Precious metals
Appliances		

**Comments:** Reclamation Technologies is a subsidiary of Blue Fin Technologies. While they' have the capability to perform demanufacture with both chip and precious metal recovery, they prefer to work with the higher end products that have a greater resale potential. They do not do any recycling themselves, preferring to send their plastics to Conigliaro and CRT's to EPA, Inc.

\* \* \* \* \*

**Company Name:** Tombarello Recycling  
**Address:** 207 Marston St.  
Lawrence, MA 01841

**Specialty:** Asset Recovery and Scrap Metal Recycling  
**Contact Name:** George Tombarello  
**Phone:** (978) 682-5226  
**Fax:** (978) 686-6484

**Capacity:** 300 tons/Mo.

**Employment:** 35

**Transportation Available:** Yes

**Products Handled:**

	<u>Disposition Paths</u>	<u>By-product</u>
Plastics	Incineration/Export	Mixed plastic housings
CRT's/Televisions	Resale/Export	Intact CRT's
CPU's	Demanufacture	
Circuit Boards	Chip removal/Precious metal recovery	Precious metals
Appliances	Recycling	Scrap metals

**Comments:** Tombarello is primarily interested in high-end electronic products that provide more value to them. They are not very interested in the low-end scrap that may come out of a municipal collection program.

**Company Name:** Windfield Alloy

**Address:** 15 Medford St.  
Lawrence, MA 01841

**Specialty:** End refiner of precious metals, specializing in electronics

**Contact Name:** Eric Tetler

**Phone:** (978) 689-2470

**Fax:** (978) 975-1640

**Capacity:** 80 tons/mo.

**Employment:** 24

**Transportation Available:** Yes

**Products Handled:**

Plastics

CRT's/Televisions

CPU's

Circuit Boards

Appliances

**Disposition Paths**

Recycle

Smelting

Demanufacture/Resale

Chip Recovery/Prec. Metals

**By-product**

Granulated Plastics (mixed)

Bare CRT's

Precious Metals

**Comment:** Windfield offers complete recycling services from their site in Lawrence. However, it is clear that their primary business is in refining metals.

## Plastics Recyclers

**Company Name:** Asian Export Material  
**Address:** 8 Park Plaza, Suite 437  
Boston, MA 02116

**Specialty:** Plastics exporting  
**Contact Name:** John Wong  
**Phone:** (617) 332- 7929  
**Fax:** (617) 969-1761

**Capacity:**

**Employment:**

**Transportation Available:**

**Products Handled:**

Plastics  
CRT's/Televisions  
CPU's  
Circuit Boards  
Appliances

Disposition Paths  
Export to China

By-product  
Baled plastics

**Comments:** Asian Export Material does not receive or process electronics directly. They receive baled plastics from various sources and then export them to China.

\* \* \* \* \*

**Company Name:** Greenbriar Associates  
**Address:**  
Billerica, MA

**Specialty:** Software recycling  
**Contact Name:** Ed McAdoo  
**Phone:** (978) 670-8141  
**Fax:** (978) 670-8142

**Capacity:** 20 tons/mo.

**Employment:** 8

**Transportation Available:** Yes

**Products Handled:**

Plastics  
CRT's/Televisions  
CPU's  
Circuit Boards  
Appliances

Disposition Paths  
Recycling

By-product  
Reused 3.5" disks

**Comments:** Greenbriar specializes in recycling software, particularly on 3.5" disks. They will reformat the disks and resell them.

**Company Name:** Ingenuity Corp.  
**Address:** P.O. Box 203  
Barnard, VT 05031

**Specialty:** New Product Development  
**Contact Name:** T. I. Geotting  
**Phone:** (802) 234-5198  
**Fax:** (802) 234-5198

**Capacity:** 90 tons/mo.

**Employment:** 13

**Transportation A available ?:** Yes

**Products Handled:**

Plastics  
CRT's/Televisions  
CPU's  
Circuit Boards  
Appliances

Disposition Path  
Recycling

By-product  
Single Resin Granules

**Comments:** Ingenuity Corp. is a specialist in recycling plastics. While they accept plastics from used equipment, they primarily deal with material directly from the manufacturers. This gives them a very pure stream of material that can be granulated and reused in making computer housings.

\* \* \* \* \*

**Company Name :** Recycling Separation Technology  
**Address:** 1A Foundry Street  
Lowell, MA 01852

**Specialty:** Processor of engineered plastics  
**Contact Name :** Ron Roberto  
**Phone :** (978) 453-3425  
**Fax:** (978) 453-2144

**Capacity:** 600 tons/mo.

**Employment:** 6

**Transportation Available:** No

**Products Handled:**

Plastics  
CRT's/Televisions  
CPU's  
Circuit Boards  
Appliances

Disposition Paths  
Recycling

By-product  
Single Resin granules

**Comments:** RST takes plastics from the manufacturers and/or demanufactures, and cleans and sorts them to be sold back to computer manufacturers.





**Company Name:** Goldstein  
**Address:** 51 Harding St.  
Worcester, MA 01604

**Specialty:** Buyers of nonferrous scrap  
**Contact Name:** Neil Smith  
**Phone:** (508) 754-5711  
**Fax:** (508) 8577

**Capacity:** 100 tons/mo.

**Employment:** 3

**Transportation Available:** Yes

**Products Handled:**

Plastics  
CRT's/Televisions  
CPU's  
Circuit Boards  
Appliances

**Disposition Path**

Recycling

**By-product**

Precious Metals

**Comments:** While strictly a scrap metal dealer, Goldstein does handle scrap printed circuit boards as well.

\* \* \* \* \*

**Company Name:** Mid City Scrap Iron  
**Address:** P.O. Box 157  
Westport, MA 02790

**Specialty:** Scrap Metal Recovery  
**Contact Name:** Mark Gitlin  
**Phone:** (508) 675-7831  
**Fax:** (508) 675-2900

**Capacity:**

**Employment:** 25

**Transportation Available:** Yes

**Products Handled:**

Plastics  
CRT's/Televisions  
CPU's  
Circuit Boards  
Appliances

**Disposition Paths**

Recycling  
Recycling

**By-product**

Precious Metals  
Scrap Metal

**Comments:** Mid City primarily deals with industrial customers receiving scrap metals to be sorted and sold.

**Company Name:** N.A Nichols  
**Address:** P.O. Box 26  
Amesbury, MA 01913

**Specialty:** Metal Recycling  
**Contact Name:** Thomas Bashaw, Jr.  
**Phone:** (978) 388-9639  
**Fax:** (978) 388-4129

**Capacity:**

**Employment:**

**Transportation Available :**

**Products Handled:**

**Disposition Path**

**By-product**

Plastics

CRT's/Televisions

CPU's

Circuit Boards

Appliances

Recycling

Scrap Metals

**Comments:** N.A. Nichols is purely a scrap metal dealer, handling all forms of metals including consumer appliances. They do not handle computers or other electronics at this point.

## Appliance Recyclers

**Company Name:** Planergy Inc.  
**Address:** 34 Saint Martin Drive  
Marlboro, MA 01752

**Specialty:** White Goods Recovery  
**Contact Name:** Stephen Thompson  
**Phone:** (800) 527-7648  
**Fax:** (508) 481-9701

**Capacity:** 40 tons/mo.

**Employment:** ?

**Transportation Available :** No

### **Products Handled:**

Plastics  
CRT's/Televisions  
CPU's  
Circuit Boards  
Appliances

### Disposition Paths

Recycling

### By-product

Scrap Metals

**Comments:** Planergy is responsible for the handling and recycling of white goods only. They do not handle any electronic goods as such.

**Donation Programs**

**Company Name:** East-West Foundation  
**Address:** 23 Dry Dock Ave., 3rd Floor  
 Boston, MA 02210

**Specialty:** Refurbishing used computers for schools  
**Contact Name:** Stephen Farrell  
**Phone:** (617) 261-6699  
**Fax:** (617) 261-6644

**Capacity:** 60 tons/ Mo.

**Employment:** 12

**Transportation Available:** Yes

**Products Handled:**

Plastics  
 CRT's/Televisions  
 CPU's  
 Circuit Boards  
 Appliances

**Disposition Paths**

Resale/Smelting  
 Resale/Demanufacture  
 Recycling  
 Recycling

**By-product**

Intact/Bare CRT's  
 Intact/Precious Metals  
 Precious metals  
 Scrap Metals

**Comments:** East-West is focused on recovering working systems for sales to schools. The rest of the material is demanufactured and sent out to be recycled. Based upon recent experience, they may start to charge for handling older systems.

\* \* \* \* \*

**Company Name:** National Cristina Foundation  
**Address:** 181 Harbor Drive  
 Stamford, CT 06902

**Specialty:** Not for profit managing  
 computer donations  
**Contact Name:** Sally Beers  
**Phone:** (203) 967-8000  
**Fax:** (203) 406-9725

**Capacity:**

**Employment:** 8

**Transportation Available:**

**Products Handled:**

Plastics  
 CRT's/Televisions  
 CPU's  
 Circuit Boards  
 Appliances

**Disposition Paths**

Refurbish

**By-product**

Intact CPU's

**Comments:** National Cristina Foundation receives products donated to its partners, refurbishes them and returns them to the partner organizations for reuse.

**Company Name:** Recycle North  
**Address:** 266 Pine St.  
Burlington, VT 05401

**Specialty:** Recycling and Job Training  
**Contact Name:**  
**Phone:** (802) 658-4143  
**Fax:**

**Capacity:**

**Employment:** 30

**Transportation Available:** Yes

**Products Handled:**

**Disposition Paths**

**By-product**

**Plastics**

**CRT's/Televisions**

**CPU's**

**Circuit Boards**

**Appliances**

Resale/Landfill

Resale

Resale/Recycling

Intact CRT's

Intact Appliances

**Comments:** Recycle North is focused on using recycling as an opportunity to give job training to the unemployed. They collect a wide variety of materials (electronics only make up 30% of their volume), and resell or recycle what they can and send the rest to the local landfill.

## Resale Brokers

**Company Name:** Allon Computer  
**Address:** 15 Merwin St.  
Norwalk, CT

**Specialty:** Buy used HP equipment  
**Contact Name:** Scott Kelly  
**Phone:** (203) 854-9446  
**Fax:** (203) 724-6567

**Capacity:** ?

**Employment:** 9

**Transportation Available:** Yes

### **Products Handled:**

**Plastics**  
**CRT's/Televisions**  
**CPU's**  
**Circuit Boards**  
**Appliances**

### Disposition Paths

Resale  
Resale  
Resale

### By-product

Intact monitors  
Intact CPU's  
Working boards

**Comments:** Allon Computer is strictly a buyer and seller of used equipment. They do not perform any demanufacture or recycling.

\* \* \* \* \*

**Company Name:** Celestica, N.E.  
**Address:** 200 Domain Drive  
Exeter, NH

**Specialty:** Remanufacturer of computers  
**Contact Name:** Pat Mongold  
**Phone:** (603) 773-3213  
**Fax:**

**Capacity:**

**Employment:** 27

**Transportation Available:** No

### **Products Handled:**

**Plastics**  
**CRT's/Televisions**  
**CPU's**  
**Circuit Boards**  
**Appliances**

### Disposition Paths

Resale/Recycling  
Resale/Recycling  
Resale/Recycling

### By-product

Intact CRT's  
Intact CPU's  
Intact boards

**Comments:** Celestica is primarily a remanufacturer providing services directly to the GEM manufacturers. They will receive used product in, retest and refurbish it to manufacturer specifications, and resell it. The remaining product is sent to reclaimers to be recycled.

**Company Name:** Cerplex  
**Address:** 9477 Waples St.  
San Diego, CA 92121

**Specialty:** Used computer and monitor resellers  
**Contact Name:** Joe Moorman  
**Phone:** (760) 839-9320  
**Fax:** (619) 552-1219

**Capacity:** 15 Tons/Mo

**Employment:** 1500

**Transportation Available:** Yes

**Products Handled:**

**Plastics**  
**CRT's/Televisions**  
**CPU's**  
**Circuit Boards**  
**Appliances**

**Disposition Paths**  
Recycling  
Resale  
Resale/Demanufacturer  
Precious metal recovery

**By-product**  
Mixed Plastic Housings  
Intact Monitors  
Intact CPU's/Precious metals  
Precious metals

**Comments:** Cerplex is primarily a reseller of used computers having recently exited the chip recovery business. They still do some demanufacturing and asset recovery with the older systems they handle.

\* \* \* \* \*

**Company Name:** Dr. Bob's Computer Orphanage  
**Address:** 299 West Main St.  
Northboro, MA

**Specialty:** Sales of new/rebuilt computers  
**Contact Name:** Bob Stetson  
**Phone:** (508) 393-5751  
**Fax:**

**Capacity:**

**Employment:**

**Transportation Available:**

**Products Handled:**

**Plastics**  
**CRT's/Televisions**  
**CPU's**  
**Circuit Boards**  
**Appliances**

**Disposition Paths**  
Donation  
Donation

**By-product**  
Intact CRT's  
Intact CRT's

**Comments:** Dr. Bob's only program for used equipment is to collect it and donate it to the Oxford School system.





## Vendor Visit Summary

**Company Name:** Absolute Recycling  
**Contact Name:** Roseanne Cristofono  
**Location:** West Haven, CT

**Visit Date:** August 17, 1998  
**Telephone:** (203) 932-2422  
**Fax:** (203) 932-3595

### **General Description:**

Absolute Recycling is a full-service recycler, offering their clients one-stop shopping for recycling of paper, plastics, electronics and pallets. They operate out of a 600,000 sq. ft. facility in West Haven, CT and have a fleet of trucks available to pickup material anywhere in the eastern U.S.

### **Strengths:**

**One-Stop Shopping:** Absolute has based their business around convenience for their clients. They do not require presorting of material by their customers, nor do they have mix requirements. They will take all forms of material from pallets to CRT's. If we are expecting a wide range of material from our program, from toasters to TV's, Absolute could offer a simple solution.

### **Weaknesses:**

**Distance:** One of Absolute's biggest weaknesses for municipal collection in Massachusetts is their distance from the population centers. While they believe they can set up a trucking network to make it work, West Haven is 2 ½ hours from Boston, which is significant when shipping large volumes of low value equipment.

### **Process:**

Absolute's process is very similar to the other companies we've seen. Incoming material is sorted at the dock and all electronics are sent to their electronics area. There it is sorted into resaleable material, exportable material and then scrap metals and glass. Absolute does very little of their own processing beyond demanufacture, performing no metals or glass processing at their facility.

### **Summary:**

Absolute Recycling is interested in setting up a pilot program for municipal collection, but they don't appear to understand the realities of collection on a town by town basis. While their "one-stop shopping" strategy is a potential plus, some local facilities (like the UMass recycling center) offer similar capabilities.

**Company Name:** Allied Computer Brokers  
**Contact Name:** Rick Nicolosi  
**Location:** 60 Railroad St.  
Bradford, MA 01835

**Visit Date:** June 8, 1998  
**Telephone:** (978) 521-5919  
**Fax:** (978) 521-5918

### **General Description:**

Allied Computer Brokers is a full-service electronics recycler, which presently has an emphasis on resale. However, they have recently created a separate subsidiary to concentrate on electronics recycling and they are making investments in processing equipment. They already have a chip removal machine in operation and will soon have a grinder for glass.

### **Strengths:**

**Resale:** Allied has a good history of selling low end product like the material we will see with a municipal collection program. This resale capability will be an important factor in keeping recycling costs low.

**Municipal Collection experience:** Allied has recently begun a pilot collection program with the city of Haverhill. While this program has only just started, the experience could be valuable in helping to create a program statewide.

### **Weaknesses:**

**Unknown Processing Capability -** Since Allied's subsidiary, ACB Electronic Recycling, has only recently been created and they have not yet acquired all of their equipment, their capability is still unknown. While clearly their proposed process looks to be effective, we have no history to base a judgment on.

### **Process:**

With the recent creation of ACB, Allied is still working to define their reclamation processes. The plan is for all material to be received in by ACB with a buyer from Allied being present during the receiving process. If the Allied person is interested in the material available, he will bid on it and it will be sold to Allied. The remaining material will be torn down and the metals and glass will be ground up for further processing.

### **Summary:**

At this point, Allied's processing capability is limited. They can receive product in and tear it down manually, but they do not have the capability to recycle it themselves. This capability may come as they invest in new equipment, but they do not have a complete process at this point, especially for plastics and CRT's.

**Company Name:** Computer Assets  
**Contact Name:** Vincent Di Rodi  
**Location:** 250 Eliot St.  
Ashland, MA 01721

**Visit Date:** August 6, 1998  
**Telephone:** (508) 881-4422  
**Fax:** (508) 881-4477

### **General Description:**

Computer Assets bills themselves as a transfer station for retired computer equipment. They try to manage the stream of equipment to the optimal disposition channels. In addition to their resale capability, they demanufacture computers and send their glass and precious metals off to be recycled.

### **Strengths:**

Strong Process Knowledge - Vincent Di Rodi, Computer Assets operations manager, is very knowledgeable about both the financial costs and the environmental impact of electronic disposition. Prior to joining CA he had managed the Asset Recovery programs for Data General and he has taught seminars at the IEEE conference in the past.

### **Weaknesses:**

Limited Processing Capability - Since Computer Assets has focused on directing the flow of used equipment, they have not developed any processing capability for metals, plastics or glass. All of these materials are sorted and then transferred to another vendor for processing. While this process works for materials with a high resale value, it may not be cost effective for municipal collection.

### **Process:**

CA's process is very simple: they receive a delivery from their clients and immediately evaluate it for its resale value. If it has value, it will be set aside for resale, otherwise, it will be torn down and its component parts will be resold or sent to a recycler.

### **Summary:**

While Vinnie Di Rodi is very knowledgeable about the industry and has some good ideas regarding municipal collection of electronics, it is unclear whether the additional handling involved in their present process will be cost effective. However, they have discussed opening satellite locations to sort their material prior to shipping. If that strategy were pursued, it might be cost effective.

**Company Name:** DMC  
**Contact Name:** Mike Magliaro  
**Location:** 16 Swampscott St.  
Newfields, NH 03856

**Visit Date:** June 8, 1998  
**Telephone:** (603) 772-7236  
**Fax:** (603) 772-5420

**General Description:**

DMC is focused on electronic recycling. Although they run a store and will sell working equipment, their emphasis is clearly on demanufacturing and processing computers and CRT's. The ultimate objective is to provide an environmentally sound solution at the lowest cost possible.

**Strengths:**

Low Cost Processing - DMC's processing costs for CRT's are among the lowest I've seen. For large lots, processing costs can run at less than \$3/ monitor.

Inventory Tracking - DMC's lot tracking mechanism allows tracking of individual pieces back to the source lot.

**Weaknesses:**

Sales Mechanism - With DMC's emphasis on processing material, there is less evidence of a strong sales organization getting top returns.

True CRT Recycling - While DMC has been touting their glass recycling opportunity for more than a year, they still have not produced any tangible results.

No Transportation - DMC does not offer transportation from the customer. If a municipal collection program were to send material to DMC, they would have to arrange their own transport to the site.

**Process:**

Upon receipt of a lot of equipment, DMC will first weigh the equipment to establish the cost of processing the lot. All charges are based upon weight with an offsetting credit returned to the customer after its value has been determined.

After weighing, the equipment will be tagged to track its flow through the facility. The equipment will be processed through 3 stages: First, all saleable items will be separated out. Second, all remaining CRT's will be sent to the crusher to be ground into glass powder, and finally, the electronic equipment will be torn down, separating scrap metal and plastics from the circuit boards. If appropriate, DMC will remove any saleable chips from the boards prior to recovering the precious metals.

After completing the separation process, DMC is having the precious metals refined, the plastics sent to Conigliaro and the glass cullet sent to Doe Run in Missouri where it is used as flux in the lead smelting process. While this remains the most cost effective option for them, DMC is also investigating a process which will turn the leaded glass into decorative tile.

**Summary:**

DMC is one of the strongest recycling options available in New England, especially for municipally generated material. Because the municipal waste stream is unlikely to have much resalable product included, DMC's weakness in this area is less important and their lower processing costs are an advantage. If a good transportation strategy can be developed to get material to Newfields, I believe they are one of the top 3 or 4 vendors available.

**Company Name:** East/West Educational Found.  
**Contact Name:** Steve Farrell  
**Location:** 23 Dry Dock Avenue  
Boston, MA

**Visit Date:**  
**Telephone:** (617) 261-6699  
**Fax:** (617) 261-6644

**General Description:**

East/West Foundation is a nonprofit organization, receiving donations of computer equipment from companies and refurbishing that equipment to provide low cost computers for schools. They will take any equipment from their donors, functioning and nonfunctioning, and will recycle any equipment that they can't use.

**Strengths:**

Low Cost Alternative - For products that have little or no after-market, East/West's indiscriminate receiving policy is very attractive. Because they are a nonprofit, they can afford to take equipment that wouldn't be profitable for someone else. However, this is not a free ride, East/West is looking carefully at the material that they are receiving and they may add some fees in the future.

**Weaknesses:**

Creative Sales Channels - Due to East/West's charter, they are focused on their donations to schools with any residual product going to reclamation. Depending upon the types of products that they receive, there might be other sales channels available to them that they are missing out on.

**Process:**

East/West has made the donation process very simple. Each company must create a list of the equipment being donated and provide two copies of that list when they deliver the product to East/West (East/West does not do pickups). East/West will confirm the material on the list and send the confirmation back to the originating company. After that, East/West will sort out any working equipment and refurbish it for their education program and tear down the rest to be recycled. In addition to the traditional precious metals that are retrieved through this process, East/West has established a sales channel for defective CRT's to a monitor repair house.

**Summary:**

East/West offers some creative alternatives for disposing of electronic waste. While they should not be treated as a dumping area for worthless electronic scrap, they may be able to use certain older products that other reclaimers would not be interested in. If the proposed municipal collection program has the capability of sorting material and sending it through multiple channels, East/West should be included in the program.

**Company Name:** Electronic Disposal and Recycling

**Visit Date:** June 8, 1998

**Contact Name:** Roland Eastman

**Location:** 8C Tinkham Ave.

Derry, NH 03038

**Telephone:** (603) 437-3370

**Fax:** (603) 437-2993

### **General Description:**

While EDR bills itself as a full-service electronics recycler, their core activities revolve around scrap metals processing. However, the owner has a vision for setting up a comprehensive processing facility which will process up to 50,000 tons per month, grinding material and sorting it using semi-automated processing lines. In addition, he is working on a CRT recovery process that he says will recover up to \$1500/ton of old monitors.

### **Strengths:**

Management Vision - Roland Eastman has built his business from nothing in just over four years and he seems to have a good grasp of the environmental issues involved with setting up a state of the art processing facility. If he gets the funding he is looking for, he could set up a low cost processing facility to match any in New England.

### **Weaknesses:**

Present Facilities - While EDR has several grinders on site and has an experimental wave eddy sorter, they do not have a well-designed process to handle demanufacturing or CRT processing in large volumes. Their facility consists mainly of a large warehouse with second hand machinery on the shelf awaiting modification for electronics processing.

### **Process:**

While today's process consists of a manual sorting and demanufacturing process, Roland Eastman's plan is to create a line with a series of conveyor belts. As each truckload reaches the dock, CRT's will be unloaded onto one line and CPU's onto another. Saleable material will be sorted out and the rest will immediately be sent through a series of automated grinders and sorters. The end product will be a glass cullet and a series of sorted metals and plastics for processing.

### **Summary:**

EDR's facilities today are not very impressive. They are dirty and cramped with old machinery. However, I believe they should be watched over the next few years to see whether they can set up the processes that they envision. If so, they could become one of the low cost recyclers in New England.

**Company Name:** Electronic Processing Associates  
**Contact Name:** Jim Maher  
**Location:** 133 Congress St.  
Lowell, MA 01852

**Visit Date:** July 2, 1998  
**Telephone:** (978) 970-2700  
**Fax:** (978) 970-3700

**General Description:**

EPA, Inc. is a full service reclaimer handling all aspects of electronic reclamation from demanufacture to precious metals refining. While they are licensed to process CRT's in Massachusetts, they are now sending all of their monitors to a company in Ohio to be recycled. They are also familiar with the issues associated with Municipal Collection of Electronics, as they are presently managing the Union County program in New Jersey.

**Strengths:**

Reclamation Process - EPA has a well organized reclamation process. While only a portion of the reclamation activities take place within their Lowell facility, they have a sound process, utilizing a combination of other vendors and/or their parent company to perform all of the required activities.

**Weaknesses:**

Plastics Processing - EPA has chosen not to pursue plastics recycling actively due to the costs of the process. While some of their plastic material is recycled, much of it is incinerated.

**Process:**

EPA utilizes their Lowell facility as a collection and demanufacturing center. Material flows into the building and all resaleable equipment is sorted out and taken to a refurbishment area. The rest of the equipment is sent down the demanufacturing line where the housings are removed from the CRT's and the circuit boards are separated from their chassis. After demanufacture, EPA delegates all of the disposition activities outside of its Lowell facility with EPA's Connecticut facility selling the equipment, the parent company refining the metals and a third party in Ohio processing the CRT's.

**Summary:**

EPA, Inc. makes a very professional presentation. Their facility is clean and well organized, and the general manager, Jim Maher, is very knowledgeable of the business. He is apparently well respected in the business, since many of the other reclaimers in New England send their monitors to him for processing.

While they may not be the lowest cost facility available, I believe they can be relied on to handle the material responsibly.

**Company Name:** Electronic Recovery Group  
**Contact Name:** Bob Dampolo  
**Location:** 12 Continental Drive  
Merrimack, NH

**Visit Date:** June 19, 1998  
**Telephone:** (603) 424-9092  
**Fax:** (603) 424-9093

**General Description:**

ERG provides two basic services, they resell workable material into the after-market and they demanufacture the rest to recover the precious metals. They do not do any direct processing of CRT's or circuit boards: the CRT's are sent to EPA, Inc. and the circuit boards are sent to Sabin Metals for refining.

**Strengths:**

Strong emphasis on resale - ERG's processes are all focused on selling their product first and tearing it down as a secondary option. To support this emphasis they appear to have established a good resale network.

**Weaknesses:**

Limited capability - ERG-s facilities are basically a large warehouse. They only have a small amount of processing equipment and limited manpower to process it. Most critical functions are outsourced to EPA, DMC or Conigliaro.

Limited capacity - ERG's staff is relatively small, so without machinery, they will not have the ability to handle large amounts of municipal waste.

**Process:**

ERG's process is focused on sorting of material. Upon arrival each lot is tagged and weighed. Then it is sorted into resaleable equipment and scrap. All of the unusable CRT's are set aside to be sent to EPA and the CPU's are disassembled, with all of the metals and circuit boards sorted by hand. If a board has valuable chips included those chips will be removed using a heat gun, otherwise, the whole board is put in a container to be sent to the refiner.

No actual refining takes place at the Merrimack facility. All recycling processes are outsourced to other vendors.

**Summary:**

While I was impressed with ERG's president, Bob Dampolo, I do not believe that ERG has the capability the types of material that will be generated through a municipal collection program. ERG's strength lies in resale and these programs are not likely to generate much saleable product.

**Company Name:** Global Recycling Technologies

**Visit Date:** July 17, 1998

**Contact Name:** Steve Pozner

**Location:** 218 Canton St.  
Stoughton, MA 02072.

**Telephone:** (781) 341-6080

**Fax:** (781) 341-6088

### **General Description:**

Global Recycling Technologies is an electronics recycler who has expanded their business from fluorescent bulb recycling to electronics demanufacture and is now investigating the recycling of CRT's.

### **Strengths:**

Glass Recycling Technology - Global's light bulb recycling process is very impressive. They have created an almost completely sealed grinding and separation process that cleans the glass byproduct and separates the heavy metals from the other waste products. While CRT's involve a heavier glass product, which could cause some problems for the machinery, they appear to have the expertise to set up an effective glass recycling operation for CRT's and TV's.

### **Weaknesses:**

Electronic Reclamation and Resale - Global's demanufacturing process is still relatively rudimentary. As they tear down the electronic products, they are separating out the different metals and the glass, but they are not actively pursuing any resale opportunities. This aspect of their process should be developed further.

### **Process:**

Global's reclamation process is based around the recovery of raw materials, not the finished products. When equipment enters their facility, the glass is separated from the metals and then each of them are dismantled, removing any plastic casings and sorting out the component materials. Global is sorting out ferrous and nonferrous metals, salvaging the printed circuit boards and removing any hazardous material. At this point, the glass is sent to an outside company, but in the future, Global expects to be able to process it themselves.

### **Summary:**

Global has a lot of potential as an electronics recycler, especially in handling CRT glass. They have several years experience in recycling fluorescent glass bulbs and they expect to transfer that expertise in the future. However, their present demanufacturing process is not very sophisticated and they do very reselling of equipment.

**Company Name:** Metech International  
**Contact Name:** Jim Gardner  
**Location:** P.O. Box 500  
Mapleville, RI

**Visit Date:** June 23, 1998  
**Telephone:** (401) 568-0711  
**Fax:**

### **General Description:**

Metech International is an established metals refiner who has been developing its electronic recovery services over the past several years. They provide demanufacturing and chip recovery services as well as precious metal refining and plastics processing. They also have a CRT recovery process, although it is in its early development.

### **Strengths:**

Metal Refining - Metech has the most comprehensive metal processing facility that I've seen. They have several grinders, both magnetic and eddy current sorters and assay facility on-site.

Plastics - Metech is developing a plastics capability on par with their metals refining. They are grinding and sorting plastics on-site and are trying to develop separate markets for each type.

### **Weaknesses:**

CRT Recovery - While Metech is selling their CRT recovery process, utilizing the R.I. Association of Retarded Citizens to provide monitor teardown and their existing grinders for processing, there are very few signs of activity on site.

### **Process:**

Metech has two separate facilities in Mapleville. The first receives the product, sorts out the resalable products and tears down the rest to recover the chips and other components. After this processing is complete, the circuit boards, scrap metals and plastics are sent across the street to the processing facility. There, the material is ground up and sorted to recover all of the metals and plastic resins.

### **Summary:**

Metech gets very high marks for their metals and plastics processing. They have the capacity to handle huge volumes of material and have a very professional set up. However, they appear to be still in the beginning stages of developing a demanufacturing and CRT recycling process. While I think that Metech could be an important part of any municipal collection process in Massachusetts, I would start them out slowly before sending them a substantial CRT volume.

**Company Name:** Reclamation Technologies  
**Contact Name:** Tom Manero  
**Location:** 55 Green St.  
Portsmouth, NH 03801

**Visit Date:** July 6, 1998  
**Telephone:** (800) 357-3873  
**Fax:** (603) 433-1178

**General Description:**

Reclamation Technologies is a subsidiary of Blue Fin Technologies, a reseller of used computer equipment. With that origin, they naturally have a predisposition toward reselling the equipment that they receive. However, they do offer a full range of demanufacturing and recycling capabilities for all of the equipment that can't be resold.

**Strengths:**

Resale/Export - RTC's focus is on the resale of equipment. They will pick up a lot of equipment from their clients, sort out all of the resaleable equipment and then recycle the rest. Because they have a large reseller organization behind them, they can often reach markets that some of the smaller, local companies can not. In addition, they have been developing an export capability, which will assist them with reselling low end products.

**Weaknesses:**

High End Focus - While RTC can handle all types of equipment, they are generally not interested in the low end equipment that a municipal collection program would be likely to generate.

**Process:**

RTC's process is very similar to the other companies that we have visited. When a shipment of material comes in, they sort out all resaleable equipment, and then sort out any resaleable components, i.e. hard drives, memory etc. Finally, any remaining material is stripped down to recover the raw materials inside. CRT's are sent to EPA, circuit boards to a smelter and plastics are going to Conigliaro.

**Summary:**

RTC operates an effective reclamation process for companies retiring high end products. However, they are not very interested in handling large volumes of low-end electronic scrap, especially TV's and appliances.

**Company Name:** Winfield Alloy  
**Contact Name:** Eric Tetler  
**Location:** 15 Medford St.  
Lawrence, MA 01841

**Visit Date:** June 30, 1998  
**Telephone:** (978) 689-2470  
**Fax:** (978) 975-1640

**General Description:**

While Winfield handles all sorts of electronic equipment through its facility, the company is primarily a scrap metal processor and precious metal refiner. In addition to demanufacturing, they maintain grinding equipment to recover base materials and utilize a chemical refining process to recover precious metals.

**Strengths:**

Precious Metal Refining - Metal refining is Winfield's primary business. They utilize a chemical refining process to recover gold, silver and other precious metals from the chips and circuit boards that they process.

**Weaknesses:**

Demanufacturing - While Winfield offers demanufacturing services, they have outsourced much of this service to Allied Computer in Bradford.

Resale - Like their demanufacturing, much of Winfield's resale activity has been sent to Allied Computer in Bradford.

**Process:**

Winfield bases their process around collection and sorting. They will collect material from their customers, deliver it to the Lawrence site and sort it. All resaleable equipment will be separated out and the rest will be set aside for demanufacture. While Winfield will perform some teardown activities themselves, they are starting to use Allied to teardown large volumes of equipment. Once the circuit boards have been separated from the base metals, they will be ground into small pieces and then treated through a series of chemical baths to separate out each of the precious metals.

**Summary:**

Winfield used to have a subsidiary that specialized in electronics reclamation, W. A. Technologies. Since they divested that company, they have tried to get back into the business in a small way. However, their operation is not well organized and they still appear to emphasize their metals refining over any resale or demanufacturing activities.

## **Other Vendors and Non-Participants**

### **Companies Expecting to Complete Survey**

<u>Company</u>	<u>Category</u>	<u>Contact Name</u>	<u>Telephone</u>
A & G Electronics	Demanufacture	Justin Doherty	(508) 799-5203
C.R. Electronics	Resale	Chris Reilly	(781) 944-6121
Goodwill Industries	Donations	Ruth Flynn	(413) 788-6981
Intermediate Processing Fac.	Demanufacture	John Pepi	(413) 577-3013
Mind Share	Donations	Charlie Thompson	(617) 787-7870
Philip Lewis & Sons		Philip Lewis	(617) 442-1250
Technology Management		Ralph Greenberg	(781) 344-6458
Wave's Line	Resale	Wave Quinto	(978) 346-9927

### **Companies Choosing not to Participate**

<u>Company</u>	<u>Category</u>	<u>Contact Name</u>	<u>Telephone</u>
Compustore	Resale	Ollie Silva	(603) 893-0372
Computrend	CRT Repair	Carmine Sarno	(603) 426-5111
Electronic Business Solutions	Resale	Anthony Oh	(508) 663-2500
Electronic Surplus Services	Resale	George Demarais	(603) 624-9600
ELI	Demanufacture	John Tyler	(978) 658-9957
Media Recovery	Software Recycling	Michael Dodson	(781) 821-2350

### **Companies Not Responding**

<u>Company</u>	<u>Category</u>	<u>Contact Name</u>	<u>Telephone</u>
Affordable Computer Tech.		Joelly Morgado	(508) 725-9599
AMC		Al Luongo	(508) 670-9395
B. Peters Associates		Vlad Volinsky	(410) 662-6380
E. L. Harvey		Ben Harvey	(800) 321-3002
Easter Seals Assistive Tech.		Jeff McAuslin	(800) 922-8290
Electronics Orphanage			(603) 224-9657
Great Eastern Technology		Brad Porter	(617) 937-0300
Handy and Harmon		Marquerite Diaz	(203) 289-4327
M-Cubed		Dennis Mixon	(508) 485-4207

## Vendor Summary

### UMass/Chelsea Center Electronic Recycling Study

#### Vendor Summary

Vendor Name	Phone Number	Service Description	<u>Products Handled/Disposition Path</u>					Page No.
			Computers	CRT's	Scrap Metals	Circuit Boards	Appliances	
A. Shapiro & Sons	(413) 663-6225	Scrap Metal Recycling	X Resale	X Export	X Recycling		X Recycling	11
Absolute Recycling		Full Service Recycling	X Recycling	X Smelting	X Recycling	X Pr. Metals	X Landfill	1, 22
Allied Computer Brokers	(978) 521-5919	Computer Recycling and Resale	X Resale	X Smelting	X Recycling	X Pr. Metals	X Recycling	1,23
Allon Computer	(800) 808-0851	Computer Resale	X Resale	X Resale				18
Asian Export Material Co.	(617) 332-7929	Plastics Export						9
Berger & Company	(401) 723-7240	Scrap Metal rocessing	X Recycling	X Export	X Recycling	X Pr. Metals		11
Celestica, N.E.	(603-773-3213	Computer Remanufacturer	X Resale	X Resale		X Pr. Metals		18
Cerplex	(760) 839-9320	Used Computer Reseller	X Resale	X Resale		X Pr. Metals		19
Community Resource Mgmt.	(781) 598-6003	Job Training through recycling	X Recycling	X Export	X Recycling	X Pr. Metals	X Recycling	3
Computer Assets	(508)485-4207	Transfer Station for electronic goods	X Resale	X Resale	X Recycling			2, 24

Computer Recycling and Refining	(203)488-0535	Computer Recycler	X Recycling	X Export		X Pr. Metals		2
Conigliaro Industries	(508)872-9668	Full service Recycling	X Recycling		X Recycling			12
Conway Metals	(781) 447-2534	Non-ferrous scrap metal recycler			X Recycling	X Pr. Metals		12
DMC	(603) 772-7236	Full-service electronic recycling	X Recycling	X Recycling	X Recycling	X Pr. Metals		3, 25
Dr. Bob's Computer Orphanage	(508)393-5751	Sell new and rebuilt computers	X Resale	X Resale				19
East-West Foundation	(617) 261-6699	Computer Donations	X Donations	X Donations		X Pr. Metals	X Recycling	16, 27
Electronic Disposal and Recycling, Inc.	(603) 437-3370	Full-service electronic recycling	X Recycling	X Recycling	X Recycling	X Pr. Metals	X Recycling	4, 28
Electronic Processing Associates	(978) 970-2700	Full-service electronic recycling	X Recycling	X Recycling	X Recycling	X Pr. Metals		4, 29
Electronic Recovery Group	(603) 424-9092	Computer Demanufacturer/ Broker	X Recycling	X Recycling	X Recycling	X Pr. Metals		5, 30
Envirocycle	(800) 711-6015	Electronic recycler w/ CRT specialty	X Recycling	X Recycling	X Recycling	X Pr. Metals		5
Global Recycling	(781)341-6080	Full-service electronic recycling	X Recycling	X Recycling	X Recycling	X Pr. Metals	X Recycling	6, 31
Goldstein Industries	(508) 754-5711	Scrap Metal Processing			X Recycling	X Pr. Metals		13
Greenbriar Associates	(978) 670-8141	Software Recycling						9
Ingenuity Corp	(802) 234-5198	Plastics Recycling						10

Karta Container	(914) 737-9211	Construction Debris Recycler	X Recycling	X Recycling				21
Metech International	(401) 568-0711	Full-service electronic recycling	X Recycling	X Recycling	X Recycling	X Pr. Metals		6, 32
Mid City Scrap Iron	(508) 675-7831	Scrap Metal Recycling			X Recycling	X Pr. Metals	X Recycling	13
M.T.L.	(978) 535-9197	Resale of Computer products	X Resale	X Resale			X Resale	20
N. A. Nichols	(978) 388-9639	Scrap Metal Processing			X Recycling		X Recycling	14
National Cristina Foundation	(203) 967-8000	Computer Donations	X Donations	X Donations				16
Planergy, Inc.	(800) 527-7648	White Goods Recovery					X Recycling	15
Product Takeback Services	(781) 275-5560	Asset Recovery Program Mgr.	X Recycling	X Smelting	X Recycling	X Pr. Metals	X Recycling	21
Reclamation Technologies	(603) 433-2223	Computer Resale and Reclamation	X Recycling	X Recycling		X Pr. Metals		7, 33
Recycle North	(802) 658-4143	Product Reuse and Job Training	X Resale				X Resale	17
Recycling Separation Technology	(978) 453-3425	Plastics Recycling Broker						10
Tombarello Recycling	(978) 682-5226	Electronic Broker and Scrap Metal Recycler	X Resale	X Resale	X Recycling	X Pr. Metals		7
Tryonics, Inc.	(603) 926-1122	Computer Remanufacturer	X Resale	X Resale		X Pr. Metals		20
Winfield Alloy	(978)689-2470	Precious Metal Refiner	X Recycling		X Recycling	X Pr. Metals		8, 34