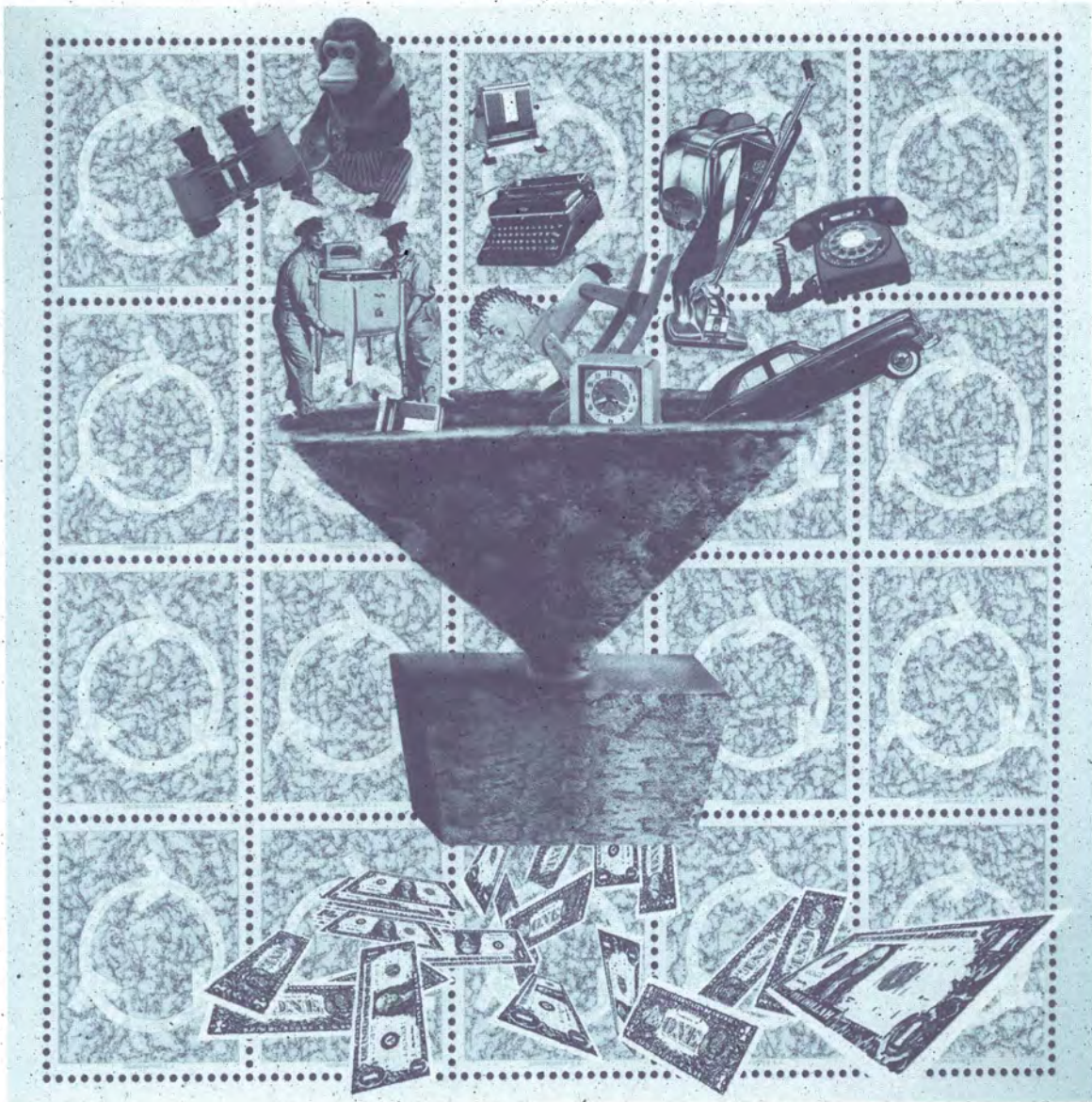


CREATING WEALTH FROM EVERYDAY ITEMS

Brenda Platt



ILSR
INSTITUTE FOR LOCAL SELF-RELIANCE

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CREATING WEALTH FROM EVERYDAY ITEMS



BRENDA PLATT

INSTITUTE FOR LOCAL SELF-RELIANCE
WASHINGTON, DC

Institute for Local Self-Reliance

The Institute for Local Self-Reliance (ILSR) is a nonprofit research and educational organization that provides technical assistance and information to city and state government, citizen organizations, and industry.

Since 1974, ILSR has researched the technical feasibility and commercial viability of environmentally sound, state-of-the-art technologies with a view to strengthening local economies. ILSR works to involve citizens, government, and private enterprise in the development of a comprehensive materials policy oriented towards efficiency, recycling, and maximum utilization of renewable energy sources.

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Introduction

Reuse, in various forms, has been practiced by a number of organizations for decades. Reuse has routinely occurred through shops that perform a maintenance, repair, rental, or remanufacturing function, or that resell surplus or used goods. Less formally, garage sales, flea markets, and auctions also redistribute used items. Many of these operations are small and locally owned, while others are large and maintain a national presence (e.g., Goodwill Industries and the Salvation Army). Despite this well developed infrastructure, most of the reusable goods in the waste stream are not recovered. In 1994, 85% of the 29.9 million tons of durable goods in the municipal solid waste stream ended up in landfills or incinerators—toys, bicycles, mattresses, couches, suitcases, appliances, computers. The list is endless. These discards contain tremendous untapped wealth. As communities strive to contain solid waste handling costs, meet waste reduction goals, and link recycling with local economic development, a new generation of reuse operations and strategies has emerged. Nonprofit organizations, for-profit retail operations, and local government initiatives have sprouted to turn one person's trash into another person's gold.

This booklet profiles 13 model reuse operations and collection programs. Most of these target the household waste stream. They represent only a sample of the numerous reuse efforts now taking place in the United States. (See ILSR's report *Reuse Operations: Community Development Through Redistribution of Used Goods*, for a list of 67 reuse and material exchange operations.)

All 13 programs profiled are unique. There is no one model. Communities looking at starting a reuse collection program or enterprise should explore options that best suit their local situation, recycling/reuse infrastructure, needs, and desired customer base.

The list of items these reuse programs recover is impressive. The ReStore accepts corks, candle stubs, thread spools, buttons, and other delectable trinkets. St. Paul picks up at curbside a wide range of reusable household items and textiles including rags as small as 5" by 5". Montgomery County, Maryland, operates a reusable building material and mattress drop-off site, offers weekly pickup of clothing and other textiles from local charities, and supports a household furniture pickup service. Urban Ore probably accepts the widest range of discards, anything from magazines and records to lawn mowers and bath tubs. Indeed, most everyday household items can be reused.

By providing information on working models and tips for replication, we hope this booklet helps expand the reuse infrastructure throughout the country. It is oriented toward the lay person, recycling and solid waste professionals, economic development officials, and community-based organizations. The operations documented are all replicable. Many are interested in starting similar enterprises in other cities or are available to assist others in doing so. If the 25.5 million tons of durable goods now discarded were reclaimed through the types of reuse operations profiled here, more than 220,00 new jobs could be created in this industry alone.

This report is one in a series of four booklets, funded by the U.S. EPA, on product reuse as an important economic development and waste reduction strategy.

The other three are:

- *Sustaining Businesses & Jobs through Pallet Reuse & Repair*
- *Plug into Electronics Reuse*
- *Weaving Textile Reuse into Waste Reduction*

Additional ILSR booklets on reuse include *Reuse Operations: Community Development Through Redistribution of Used Goods* (1995) and *Community Development Corporations and Reuse Operations: Four Case Studies of Working Relationships* (1996).

For more information on these booklets, contact the Institute for Local Self-Reliance, Washington, D.C., 202-232-4108.

Durable Goods

- Durables goods generally are defined as products having a lifetime of three years or more. They include large and small appliances, furniture and furnishings, carpets and rugs, consumer electronics, sporting equipment, luggage, toys, hardware, building materials, kitchen utensils, and the like.
- In 1994, an estimated 29.9 million tons of durable goods were generated in the United States

municipal solid waste stream (excluding building and construction materials, shipping/transport items, and automobiles).

- Of this 29.9 million tons, which represents 14.3% by weight of total municipal solid waste generated, only 4.4 million tons were recovered. The remaining 25.5 million were landfilled or incinerated.

Source: *Characterization of Municipal Solid Waste in The United States: 1995 Update*, U.S. EPA, EPA530-R-96-001, March 1996.

Table 1: Model Reuse Operations and Collection Programs

Community/Operation	Location	Operation Type	Customer	TPY	% Reused (b)	Start Date
Calaveras Co./Salv. Army	CA	Salvation Army trailer at landfill	Salvation Army	48	90%	1992
Chatham Co. Swap Shops	NC	Co.-run Swap Shops at drop-off sites	Public	NA	90%	1993
City of LA/Salvation Army	CA	Pilot curbside of textiles and HH items	Salvation Army	40	NA	1995
Intern'l Furniture & Bedding	Baltimore, MD	Mattress remanufacturing plant	Mattress retailers	800	90%	1984
L.A. Shares	LA, CA	Nonprofit reuse operation	Nonprofits and schools	270	99%	1993
Materials for the Arts	New York, NY	Govt.-run reuse operation	Arts/cultural community	428	95%	1979
Montgomery County	MD	Co.-run drop-off, and furniture pickup	Varies (b)	368	100%	1990
Recycletown	Rio Nido, CA	Nonprofit drop-off and retail reuse operation	Public	273	11%	1992
ReStore	Montpelier, VT	Nonprofit retail reuse store	Public	35	97%	1990
St. Paul/Goodwill	MN	Curbside collection of textiles and HH items	Goodwill Industries	168	92%	1992
Surplus Exchange	Kansas, MO	Nonprofit reuse and repair operation	Nonprofits	1,030	70%	1984
Urban Ore, Inc.	Berkeley, CA	For-profit reuse/recycling retail operation	Public	3,500	73%	1980
Wooden Artifacts Cons.	Stone Co., AR	Nonprofit furniture repair workshop	Families/individ. in need	5	100%	1989

Source: Institute for Local Self-Reliance, 1996

HH = Household

TPY = Tons Per Year

(a) Percent of incoming materials that are actually reused or repaired; i.e., as-is or refurbished for item's original intended purpose. Does not include remainder that is recycled, i.e. reclaimed for salvage value.

(b) Textile recycler for textiles, The Loading Dock for building materials, Salvation Army and Beds Are Us for mattresses, and the Housing Opportunities Commission for furniture.



Magazines on sale at Urban Ore's Arts and Media Exchange.



Toy rocking horse on sale at Urban Ore's General Store.

Reuse Development Organization (ReDO)

A new membership organization for reuse operators recently formed to promote reuse as an environmentally sound, socially beneficial and economical means of handling unwanted and discarded materials. Called the Reuse Development Organization, or ReDO, the association will provide the following services to its members:

- Information exchange and a place to find reuse information, especially profiles of other reuse businesses and programs, funding sources, other resources, results of research and development efforts, donors of materials
- Goods exchange and brokerage through a central network
- Local or regional meetings
- Trade organization to represent members
- Consulting or consulting referrals

For more information, contact either Mary Lou Van Deventer, Urban Ore, Inc., 6082 Ralston Avenue, Richmond, CA 94805, or Dee Dee Diccicco-Craft, Environmentally Yours, P.O. Box 619, West Sand Lake, NY 12196.

Community Benefits of Reuse

Reuse programs benefit communities in many ways: they reduce landfill/incineration costs, divert discards to their highest and best use, reclaim high-value materials (often for the poor and needy), support many individuals and enterprises that repair or recycle secondhand goods, create decent jobs, and/or pay local residents and businesses for their discarded materials, thus keeping money circulating within the local economy. They also benefit the environment. Reuse reduces the need to produce new products, thus averting the extraction, processing, and transportation of additional natural resources. The land and habitat destruction and pollution that result

from new production are all avoided when an item is reused.

In addition, sale of reusable items also helps pay for community rehabilitation and job training programs. Revenues from sale of used clothing and donated household items, for instance, play a key role in funding Goodwill's nonprofit programs and services—including employment, education and training, community programs, and rural rehab technology. The Salvation Army, similarly, funds its drug and alcohol rehabilitation programs from items sold at its thrift stores.

- Reuse operations create 9 times more jobs on a per-ton basis than traditional recycling processing facilities and 38 times more jobs than landfills or incinerators.
- If the 25.5 million tons of household durables now discarded were reclaimed, more than 220,000 new jobs could be created in this industry alone.
- Reuse operations such as Urban Ore's support many additional individuals and enterprises that earn a living from repairing or otherwise recycling secondhand goods.

Job Creation

Table 2 shows the number of jobs sustained by 9 reuse businesses. These operations employ a total of 162 full-time equivalent workers and reclaim more than 18,600 tons of materials per year. On average, this translates to 8.7 jobs for every 1,000 tons of materials handled. On a per ton basis, these various reuse operations sustain 9 times more jobs than traditional recycling sorting and processing facilities, and 38 times more jobs than do landfills and incinerators.

Reuse has a high job-to-ton ratio because it is more labor-intensive and less capital-intensive than other ways of handling discards. Reuse operations also tend to be smaller scale. The six multi-material reuse operations profiled in this booklet, handle between 35 and 3,500 tons per year. In contrast, multi-material recycling sorting and processing facilities handle on average 41,300 tons per year. In general, as the size of the operation increases, fewer jobs tend to be created per ton handled. Thus, more jobs will be created if a network of smaller reuse operations is established rather than a small group of larger, more regionally-based ones.

The actual jobs created and wages paid varies considerably depending on the type of operation. Many of the jobs at reuse enterprises are skilled jobs.

About half the jobs at International Furniture and Bedding, a mattress dismantling and remanufacturing company, are skilled. These include reupholsterers, piecework employees, sewers, and cutters. Drivers make \$20,000 to

\$30,000. Some of the piecework employees earn \$600 to \$700 per week.

L.A. Shares, Materials for the Arts, and the Surplus Exchange are similar operations in that they pick up donations, display these in their warehouses/showrooms, and make them available to eligible and registered members, who come to "shop." Jobs created at these operations include drivers, warehouse managers, shopping assistants, and donations coordinators. Workers also have or gain communications skills as they interface with the public on a day-to-day basis. Drivers, for



ILSR, 1996

Joseph Han is the computer technician at L.A. Shares, a Los Angeles-based multi-material reuse operation that accepts donated computers. Mr. Han is part of the City of Los Angeles' Department of Aging Title 5 Program, which returns senior citizens to the work place.

Table 2: Jobs Created by Reuse Operations

Organization	Location	Amount of Materials Handled (TPY)	FTE Jobs	Jobs per 1,000 (TPY)
International Furniture & Bedding	Baltimore, MD	800	50	63
L.A. Shares	LA, CA	270	6	22
Materials for the Arts	New York, NY	428	8	19
Recycletown	Rio Nido, CA	273	5	18
ReStore	Montpelier, VT	35	2	57
Goodwill Industries/Easter Seal	St. Paul, MN	12,338	45 (b)	4
Surplus Exchange	Kansas, MO	1,030	19.5	19
Urban Ore, Inc.	Berkeley, CA	3,500	26	7
Wooden Artifacts Conservation	Stone Co., AR	5	0.5	100
Total		18,679	162	8.7

FTE = Full-time Equivalent TPY = Tons Per Year NA = Not Available

Source: Institute for Local Self-Reliance, 1996

(a) These jobs represent the number of people the Salvation Army employs at its warehouse in Canago Park. These workers handle all the donations to Salvation Army, not just the curbside materials.

(b) These jobs represent the number of people Goodwill Industries employs in collecting and handling 12,338 tons per year of donations at its St. Paul facility, and not just the 168 tons per year picked up at curbside.

Job Creation (continued)

instance, are usually the eyes and ears of these operations and are the staff who most directly interact with donors—an important function. The Surplus Exchange does a significant amount of repair work—mostly computer-related. Its workforce also includes technicians and repair persons.

Recycletown, ReStore, and Urban Ore are the only retail reuse operations profiled that are open to the public. Recycletown's 5 employees handle a variety of tasks, from sales to appliance recycling. The ReStores's five part-time employees have business management, sales, and/or communications skills. As the ReStore specializes in art and educational supplies, its clerks are artistic and creative and often act as educators when children and parents shop at the store.

Most of the jobs at Urban Ore are skilled too. Sales and procurement staff learn from each

other. While the organizational structure is hierarchical, everyone has the capability of making decisions (such as negotiating sales and purchases). Wages are relatively high at \$9 to \$18 per hour. To encourage profits and cooperation, Urban Ore augments salaries with bimonthly bonuses, which are divided equally among all employees according to their hours. The Bonus Pool is based on 9.5% of net sales volume plus \$15 for each ton diverted. Staff morale is high and turnover is low.

It is important to note that reuse operations such as Urban Ore's support many additional individuals and enterprises that earn a living from repairing or otherwise recycling secondhand goods.

See ILSR's companion booklet, *Plug into Electronics Reuse*, for information on jobs created and skills gained through reuse and repair of electronics.



ILSR, 1996
L.A. Shares' two drivers, who pick up donations everyday. Drivers make \$8 an hour.

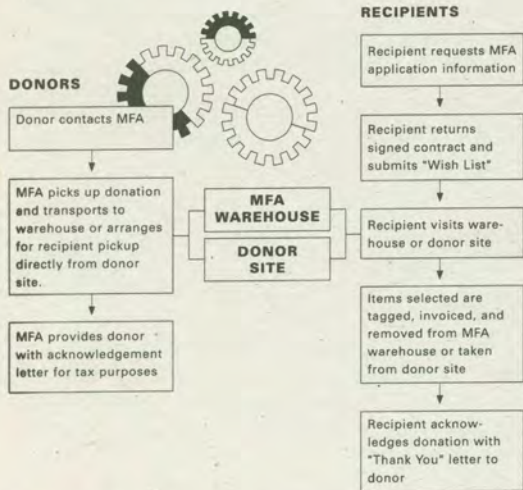
Community Benefits of Reuse

Transferring Materials to Nonprofit Groups and the Community

The community in which these reuse operations are located benefit from the transfer of goods and materials.

L.A. Shares, Materials for the Arts, the Surplus Exchange, Wooden Artifacts Conservation, and

HOW IT ALL WORKS



This flow chart reproduced from Starting a Materials Donation Program (produced by Materials for the Arts) shows how the donor/recipient process works at Materials for the Arts.

the Housing Opportunities Commission (in Montgomery County, Maryland) serve low-income people, nonprofit groups, public-interest entities, and/or government agencies. More than 1,500 nonprofit organizations and schools have received goods from L.A. Shares. Materials for the Arts has served more than 1,800 nonprofit arts and cultural groups and programs, and city agencies.

Montgomery County's Don't Dump, Donate! program and its furniture pickup service both serve the low-income community. Reusable building materials collected through its Don't Dump, Donate! program go to The Loading Dock, a nonprofit building material reuse operation in Baltimore, Maryland, which supplies low-cost materials to nonprofit religious organizations, property owners of low-income housing, and low-income individuals. The County supports a furniture pickup service operated by The Housing Opportunities Commission (HOC), which serves families who need homes. HOC collects furniture in good condition from residents on an on-call basis and delivers these the same day to families in need. The Wooden Artifacts furniture repair workshop in Mountain View, Arkansas, likewise distributes furniture to families and individuals in need.



This trailer is part of Montgomery County, Maryland's Don't Dump, Donate! program, which collects reusable building materials and supplies.

Building Community through Reuse

Recycletown operated by Garbage Reincarnation in Sonoma County, California, is probably the best example of how a reuse operation can help build community and become a fun activity for those involved. To appeal to Californian nostalgia about the wild west, Garbage Reincarnation transformed its recycling and reuse drop-off site into a "wild west town" replete with General Store, Library, Kitchen, and other buildings. People want to come to Recycletown—for community, for fun,

for materials, to avoid disposal costs, to tinker. Recycletown has become a gathering place for tinkering ideas and storytelling. It evokes creativity and attracts a number of artists and sculptors. Garbage Reincarnation holds a yearly event called the Annual Junk Art Sculpture Competition, also known as Sculpture. It is a dynamic educational and promotional event that brings the local community to Recycletown.

Strategies for Diverting Reusables

Urban Ore



The salvager takes the material off the floor and loads them into Urban Ore's box truck. When full, the truck goes over the transfer station scale to get a weight slip, and the salvager and other staff unload it at the sales area's dock. Then the salvager returns to the floor.

Many strategies exist for diverting reusable items from the waste stream. St. Paul operates regular curbside program for reusable household items and clothing. Montgomery County supports a household furniture pickup service. Calaveras County and Sonoma County, California, both support drop-off sites for reusable items. Calaveras County staff supervise a Salvation Army trailer at the local landfill and direct citizens to load their reusable items into the trailer. Sonoma County pays Garbage Reincarnation to operate recycling/reuse depots at its transfer station and landfill. The City of Berkeley allows Urban Ore to salvage reusable goods directly from the transfer station tipping floor. Urban Ore also collects reusable items at curbside once a year in Berkeley in conjunction with the City's annual bulky trash collection program.

Chatham County, North Carolina, operates several "swap shops" where residents can leave reusable items for other residents to take. Montgomery County, Maryland, has a drop-off program for reusable building materials and mattresses.

The ReStore, L.A. Shares, Materials for the Arts, the Surplus Exchange all offer on-call pickup service for reusable items they handle.

See individual profiles for details on how these enterprises and collection programs operate.

In addition to starting or facilitating collection of reusable items and encouraging the development of new reuse enterprises, communities can help build the reuse infrastructure by producing directories identifying operations that repair goods, accept donations of unwanted items, and that sell secondhand goods.

Montgomery County, Maryland, published such a directory, *Use It Again, Montgomery County: A Household Guide to Waste Prevention By Repairing, Renting, and Reusing Goods*. It lists 100 businesses and organizations.

The Berkeley Albany Resource Directory is another model reuse directory. Each section includes a map indicating where businesses handling specific types of goods (such as toys or clothing) are located.

The New York City Department of Sanitation produced a similar guide, *Reuse It, Repair It—But Don't Throw It Away*. It took a different tactic. Instead of listing the hundreds of businesses in the city that repair, reuse, rent, or sell secondhand goods, its directory tells people how to look these various businesses up in the yellow pages.

See Appendix A for sample directories and outreach materials produced by model reuse collection programs and operations.



One of Urban Ore's salvagers, holding chairs at transfer station. The salvager's job is to find items that are good as is, can be repaired, or in any event can be sold. He or she has to recover them before the loader operator pushes the material into the big pile.

Replication

The ability to replicate reuse programs similar to those profiled in this publication is key to expanding the reuse infrastructure. Every community should have access to an operation that reuses goods.

All the model programs profiled can be replicated, and are exploring replication, interested in replication, or are available to help others replicate their operations. (See profiles for specific tips for replication.)

Those who run reuse enterprises say that knowing where the materials are and how to get access to them is the number one tip for success. This requires good business contacts often facilitated by a well connected board of directors. In an industry that relies on a large flow of materials, high-profile publicity is key.

For those enterprises that have repair operations on site, sufficient warehouse space is a necessity. The space need not be large and can be leased. The reuse operations profiled lease or own warehouses or sites ranging in size from 2,000 square feet to 3 acres. Many

recommend starting out leasing as this provides expansion flexibility as the operation grows.

Start-up costs vary depending on type of operation. Materials for the Arts, L.A. Shares, and the Surplus Exchange estimate that replicating their operations would require \$150,000 to \$250,000 in start-up costs. International Furniture and Bedding reports that it needs a \$100,000 investment to replicate its operation. On the other hand, the ReStore, Recycletown, and Urban Ore all require minimal start-up capital or financing.

One common thread running through many programs is the need for a "program champion," the key person who makes the program happen. Without the dedicated work of Dan Knapp and Mary Lou Van Deventor, Urban Ore would not exist. The same is true for Bert Ball at L.A. Shares, Susan Glass at Materials for the Arts, Pavitra Crimmel at Recycletown, and Connie Leach at the ReStore.

Calaveras County, California

In Calaveras County, in the foothills of California's Yosemite Mountains, officials have found an innovative solution to capture reusable items before they end up in the county landfill.

In 1989 the State of California mandated 25% waste reduction by 1995, and 50% by 2000. To meet these goals, large counties and cities have contracted with both for-profit and nonprofit vendors to establish salvage shops at their landfills and transfer stations, but smaller counties such as Calaveras (population 36,000) lack sufficient volume to support such shops.

Calaveras County officials solved this problem by contracting to supervise a Salvation Army trailer at the county landfill. County workers direct citizens to load their reusable items into the trailer. They call the Salvation Army to pick up the trailer when it is full.

In past years, the Salvation Army had several trailers parked around the county to receive donations, but removed them due to budget cut-backs.

The partnership allows the Salvation Army to bolster its collections without adding staff and diverts about 4 tons per month of reusable items from the landfill at no cost to county residents.

Although this program does not, by itself, satisfy the waste generation reduction requirement, county officials are very satisfied with its effects. With a relatively small landfill and limited resources, these several tons per month bring Calaveras County a little closer to waste reduction goals.

Jim Hemminger, Deputy Director
Calaveras County Public Works
Government Center
San Andreas, CA 95249
Phone: 209-754-6403
Fax: 209-754-6472

- **Type of operation:** Salvation Army trailer at County landfill
- **Start-up date:** October/November 1992

Materials Handled, Collection, and Marketing Information

Quantities of discards handled	An estimated 48 tons per year
Discards repaired/reused	90% by weight
Incoming discards disposed	10% by weight
Types of durable discards handled	Furniture, appliances, toys, consumer electronics, books, bicycles, exercise bicycles
Types of other materials handled	Clothing
Sources of discards	County residents bringing waste to the landfill
Collection strategy/method	Salvation Army trailer is parked at the county landfill. Residents bringing in reusable items are directed to the trailer. When the trailer is full, landfill staff call the Salvation Army to send a truck to pick it up.
Customers/end markets	Salvation Army sells items in its thrift stores, raising money for programs and providing job training for clients.
Service area	County-wide
Marketing strategy	Residents see the trailer as soon as they come into the landfill facility. The trailer is mentioned in the County recycling guide.

Process

Equipment used	Salvation Army trailer, truck to pick it up
Site/building description and size	Located at county landfill
Site/building leased or owned	County land
Operating schedule/shifts	Whenever the landfill is open

Process (Continued)

Salvation Army leaves its trailer at the county landfill. Prominent position ensures that self-haulers notice the trailer before unloading their discards. Landfill gatekeeper on duty instructs citizens to load reusables into the trailer. (Landfill supervisor is in contact with Salvation Army so staff know exactly what is acceptable to the Salvation Army.)

Landfill supervisor calls the Salvation Army for pickup when the trailer is full. Salvation Army uses the items in its Thrift Shop program, providing job training for Salvation Army clients and funds for its social service programs. After Salvation Army picks up the reusables, workers in its job-training program sort, clean, and repair the items.

Costs and Benefits

Capital costs	None to the County
Operating costs	Negligible operating cost to County
Cost for incoming discards	Donated
Revenues	None for County
Financing mechanisms	None for County
Full-time equivalent jobs	None for County
Job skills required/training	Salvation Army clients learn valuable furniture repair and retail skills through the program.
Employment benefits/wages	None for County
Price recipients pay for items	Shoppers at Salvation Army stores pay market rates for items.

Replicability

Can operation be replicated	Yes
Replication/expansion needs	County staff would like to expand the program by locating 1 or 2 more Salvation Army trailers around the county to capture more of the potential waste stream.
Available to help replicate business	Yes, County staff are willing to share their experience with communities interested in trying a similar program.

Tips For Replication

- Landfill supervisor should be the main contact with the agency picking up the reusables.
- Small counties with relatively small waste streams must improvise to reduce waste generation.

Chatham County Swap Shops

Since 1993, Chatham County (NC) has established "Swap Shops" at all of the county's twelve waste collection centers. In this rural county thirty miles east of Raleigh, citizens are required to self-haul their waste to one of the staffed collection centers. Instead of choosing between recycling and the landfill, the county's 42,000 citizens can leave their reusable household durables such as furniture, tools, appliances, toys, and sporting equipment; and clothes for others to pick up. Collection center staff monitor the Swap Shops to make sure all donated items are (1) reusable, and (2) not a danger to people picking up from the shop.

The Swap Shops were planned during the design process for the new solid waste and

recycling collection centers, in response to the County Solid Waste Management Task Force's desire to promote reuse, and citizen pressure for a way to keep usable items out of the landfill.

The Swap Shops are a key element of Chatham County's effort to reduce waste generation. Although the amount of waste diverted has not been quantified yet, public participation is strong. In 1994, County personnel reported filling a 14-foot trailer every month with unclaimed clothing from the first five shops. Unclaimed items are transferred to local thrift shops, social service providers, or other organizations that can reuse them.

Matt Young
 Recycling Coordinator
 Chatham County Recycling Dept.
 P.O. Box 87
 Pittsboro, NC 27312
 Phone: 919-542-8239
 Fax: 919-542-8272

- **Type of operation:** county-run Swap Shops at waste collection centers
- **Start-up date:** April 1993

Materials Handled, Collection, and Marketing Information

Quantities of discards handled	Not quantified yet
Discards repaired/reused	90% est.
Incoming discards disposed	10% est.
Types of durable discards handled	Furniture, hand tools, appliances, toys, sporting equipment, shoes, books, household items. Electrical and fuel-operated appliances, motorized equipment, and power tools are also accepted, but must be stored in attendant's building; these are not "swapped."
Types of other materials handled	Clean untrorn clothes
Sources of discards	County residents, although some businesses also may be participating
Collection strategy/method	Residents drop off unwanted reusables when they drop off their trash and recyclables
Customers/end markets	County residents, although some businesses also may be participating
Service area	Countywide
Marketing strategy	The County does little marketing. It's not necessary as residents see the buildings on their way into the collection centers.

Process

Equipment used	12 roofed buildings, 10 feet x 13 feet each
Site/building description and size	Buildings sit on concrete slabs and have three walls, cubby holes, shelving, and clothes racks.
Site/building leased or owned	All shops are on county owned or leased land
Operating schedule/shifts	Waste collection centers are staffed 7 AM to 7 PM Monday to Friday and 1 PM to 7 PM Sunday



Chatham County waste and recyclables collection center

Chatham County



Chatham County

One of Chatham County's Swap Shops.

Process (Continued)

Citizens drop off materials. Staff make sure they are safe and usable. Items needing more attention go to the local PTA thrift shop. These include electrical and fuel-operated appliances, motorized equipment, power tools, and items that could cause damage or harm (i.e., sharp objects.) These items are stored in attendant's building until recycling staff make weekly pickup. Appliances and/or equipment are not allowed to be tested on site.

Staff discard items that are not usable. Clothes are hung on a rack. Staff make sure floors are swept and items are organized. Citizens take things they want—first come, first served.

The stores are cleared out every two weeks. Usable items remaining after that time are given to thrift shops and missions. Shoes and clothing left in the Swap Shops longer than two weeks are bagged and stored in the attendant's building. Recycling staff stop by periodically to pick up clothes bags and transfer these to the Helping Hands Mission in Raleigh.

No equipment, other than plastic bags, is needed to process reusable items.

Costs and Benefits

Capital costs	\$6,500 - \$8,000 per building; approx. \$80,000 for program thus far
Operating costs	Negligible percentage of time from recycling officials and workers
Cost for incoming discards	None
Revenues	None
Financing mechanisms	County solid waste budget
Full-time equivalent jobs	1 FTE. Represents 35 full-time and part-time waste collection center staff dedicating about 5% of their time to monitoring the Swap Shops.
Jobs skills required/training	Retail skills
Employment benefits/wages	Collection center personnel are paid \$5.00 to \$6.50 per hour. Both full-time and part-time employees receive benefits.
Price recipients pay for items	None

Replicability

Can operation be replicated	Yes
Replication/expansion needs	The Recycling Department aims to have all twelve locations up and running; and to increase diversion from the waste stream by better training collection center personnel, and educating the public.
Available to help replicate business	Yes, interested parties are invited to contact Chatham County officials, visits to the facilities can be arranged.

Tips For Replication

- Visit a working operation.
- Talk to other counties to find out how much waste they are diverting.
- Determine savings based on avoided disposal costs-- this will help you "sell" the program.
- Keep the Swap Shops neat and organized.

City of LA / Salvation Army

In November 1992, the Salvation Army, in Canoga Park, together with ABC Wipe and Cloth, a textile and leather processor, approached the Los Angeles Bureau of Sanitation Recycling and Waste Reduction with a proposal to develop a year-long pilot leather, textile, and reusable items recycling program within the Canoga Park residential area of West Valley Refuse Collection District, a suburb of Los Angeles. The Salvation Army chose this area because of its proximity to Salvation Army service centers. The proposal involved developing an agreement to allow the Salvation Army to collect—on a predetermined schedule and with its own vehicles—these materials set out at the curb in specially marked clear plastic bags, and to sell these materials for reuse either in their thrift shops or directly to textile recyclers, such as ABC Wipe and Cloth. The Salvation Army in the greater Los Angeles area has 340 vehicles and over 140 people staffing 11 centers. All proceeds from the sale of materials were to supplement the Salvation Army's Homeless Shelter Program.

In 1994, the City of Los Angeles endorsed the proposal and partnered with the Canoga Park Salvation Army to operate the 12-month pilot curbside program in west San Fernando Valley. Under the program, the 10,700 residents of West Valley were encouraged to put donations in bags alongside their trash cans on street curbs,

where the Salvation Army collected them on a weekly basis. The donations, which included shoes, clothes, small appliances and knickknacks, were sold at thrift shops with profits going to the Salvation Army. The pilot expected to divert 93,400 pounds or 46.7 tons of textiles and leathers each month from the Lopez Canyon landfill. The City expected to save approximately \$28,000 a year in collection and disposal costs as a result.

The effort began with about 200 households before it was expanded to all 10,700 residents. To begin the program, the City distributed special 32-gallon plastic bags in select neighborhoods in the West Valley. The bags were accompanied with an information brochure explaining the program. Participation in the program was voluntary. The City supported the program by picking up the \$16,500 cost of printing the brochures as well as purchasing 100,000 plastic bags printed with the Salvation Army's logo, the City seal, and instructions on what materials were acceptable and how to set these out.

While the program was well conceived and properly executed by all parties, the Salvation Army declined to renew its agreement with the City because of scavenging problems. Scavengers—using pickup and moving trucks stole donations before the Salvation Army drivers could collect them.

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Edward C. Irby
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The Salvation Army
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Phone: 818-883-6321
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- **Type of program:** pilot curbside collection program for textiles and reusable household goods
- **Start-up date:** October 1, 1994 through October 1, 1995

Materials Handled, Collection, and Marketing Information

Quantity of household goods handled	From Oct. 1994 through Sept. 1995, 79,562 pounds (39.8 tons) were picked up at curbside
Incoming goods reused	Figures for the pilot program alone are not available. The Salvation Army reuses about 40% of all the donations it receives.
Incoming goods disposed	The Salvation Army disposes about 60% of all the donations it receives.
Types of textiles handled	Clothing, accessories and shoes, linens
Types of other materials handled	Toys, books, leisure equipment, tools, cooking utensils, dishes, glassware, small working appliances, and electronic items
Sources of reusable items	Residents of West Valley. The Salvation Army estimates it served about 25,000 households.
Collection strategy/method	Residents put reusable household items in the specially printed clear plastic bags distributed by the City, and placed these next to their yellow recycling bin on trash collection day. Upon collection of each plastic bag containing reusable household goods, the Salvation Army collection crews would leave a new empty plastic bag in its place. If residents set out unacceptable items, the Salvation Army would not pick up bags and would tag them with a notice explaining why bag was not picked up.
Customers/end markets	The Salvation Army. Unsaleable textiles are sold to Chamilin Enterprises in San Francisco.
Marketing strategy	The City distributed plastic bags during the first week of the test program, along with flyers in both English and Spanish, explaining to residents what goods were acceptable and how to set these out. It also issued a media alert publicizing the program.



Salvation Army/City of Los Angeles bag specially designed for pilot program. The Salvation Army had no problems with the bag.

City of Los Angeles



City of Los Angeles

Ed Irby showing baled loads of textiles at Salvation Army facility.

Process

Equipment used	HDPE plastic bags made with 10% postconsumer plastic, 1 baler, 1 forklift, 2 metal containers (one for trash and 1 for scrap metal), 24-foot truck, 3 conveyor belts, 100 to 200 carts
Site/building description and size	Collected materials were taken to the Salvation Army's Canago Park center, a huge warehouse, which has been open since 1963.
Operating schedule/shifts	Warehouse operates 7:30 to 4 PM, 5 days per week. Salvation Army's stores are open 9 AM to 7 PM, 6 days per week.

Under its agreement with the City, the Salvation Army daily recorded the following: (1) the address of each resident setting out bags; (2) the number of bags collected; (3) an estimate of the type of materials collected from each resident; (4) the daily tonnage of household goods collected; and (5) the name of the truck driver, and the route the truck was on. The Salvation Army provided these statistics to the City on a monthly basis. Residents wanting a receipt for their tax-deductible donations had to call Salvation Army and request one.

The Salvation Army used a 24-foot 26,000-pound vehicle for curbside collection. Unfortunately, crews only picked up about ten bags a day. Scavengers would get away with most of the materials set out at curbside. The Salvation Army contacted police and investigated a few times, but no one was caught and prosecuted. Crews tried starting to pick up bags at 5 AM and reversing the order of the routes. Nothing worked.

Collection crews would deliver collected bags to the Salvation Army's Canago Park facility. Trucks would first be weighed. Bags were off loaded at the warehouse and items would be processed along with the Salvation Army's regular donations. Four women each sort 4,000 pounds of garments per day. Items deemed saleable are transported to one of the Salvation Army's four regional stores. Other textiles are baled for sale to Chamilin Enterprises, a textile recycler in San Francisco. Six bales (weighing 1,300 to 1,400 pounds each) are processed each day at the warehouse. Bales include clothing returned from stores as part of the "rag out" process. Clothing that doesn't sell in 30 days is automatically baled.

Occasionally individuals participating in the Salvation Army's rehabilitation program repair items needing repair. Finished products are then sold at Salvation Army thrift stores, generating funds that support its drug and alcohol rehabilitation program.

Tips For Replication

- Anti-scavenging program essential
- Regular pickup schedule promotes greater participation
- Develop strong markets for textiles and reusable items

Costs and Benefits

Capital costs	No new capital investments were incurred to operate the pilot program.
Operating costs	NA
Cost for incoming household goods	Textiles and other reusable household goods were collected free of charge from residents.
Revenues	NA
Financing mechanisms	The Salvation Army picked up collection costs. The City paid for bags and flyers.
Full-time equivalent (FTE) jobs	The Salvation Army started with 2 drivers and 2 helpers; within 2 months, it had cut back to 1 driver. The warehouse has 22 workers. Each store has 3 to 4 employees (one has 10).
Job skills required/training	No skills required. Workers mostly price and sort items.
Employment benefits/wages	Workers earn minimum wage.
Price end users pay for goods	NA

Replicability

Can program be replicated	Yes, but only if effective anti-scavenging program is put in place.
Replication/expansion needs	Effective anti-scavenging program
Available to help replicate program	Yes. The City will share information such as its contract with the Salvation Army.

International Furniture & Bedding

International Furniture and Bedding (IFB) is a 12-year old mattress manufacturing operation. IFB makes new mattresses by collecting, dismantling, and reusing old mattresses. The company has added furniture reupholstering to its operations. IFB takes pride in the number of jobs it has created for people in Baltimore, especially those who have difficulty finding jobs—such as ex-convicts. IFB has been

working with State Use Industries on a pilot program that allows private companies to work with prisons. IFB continues to expand and is very interested in replicating its plants in other cities. It recently moved into a larger building. IFB has replicated its operations already by starting West Coast Quality Bedding in Brooksville, Florida.

William Voelp, President
 Michael Fannon, Product Recovery
 Michael Hutchins, Vice President
 International Furniture & Bedding
 700 E. Monument Street
 Baltimore, Maryland 21202
 Phone: 410-244-1600
 Fax: 410-244-1009

Materials Handled, Collection, and Marketing Information

Quantities of mattresses handled	400 to 500 old mattresses per day (about 3,000 per week). In 1994, 1.4 million pounds of mattresses were handled. This increased to 1.6 million pounds in 1995. This year IFB expects to process 2.5 million pounds of mattresses. (Each mattress weighs about 48 pounds.)
Incoming mattresses repaired/reused	Approximately 90% by weight (another 7.5% is recovered for recycling)
Incoming mattresses disposed	Approximately 2.5% is disposed.
Types of commodities handled	Old mattresses and old furniture. It cannot accept mattresses that are water or fire damaged or those that cannot stand up on their own when placed vertically.
Types of other materials handled	Cloth, new foam, new wood, typar, and other materials for remanufacturing mattresses and reupholstering.
Sources of mattresses	Cities and counties surrounding Baltimore
Collection strategy/method	IFB has approximately twenty 45-foot trailers at various sites in the region. These are picked up about once a week.
Products/customers/end markets	IFB manufactures 98% recycled-content new mattresses, which it sells to mattress retailers.
Service area	IFB receives mattresses from as far south as Richmond.
Marketing strategy	Approaches mattress retailers. IFB has no problems selling its mattresses.

Process

Equipment used	Forklifts are used to move mattresses around the building. Conventional mattress manufacturing equipment is used to make new mattresses.
Site/building description and size	One two-story building with a total of 76,000 square feet
Site/building leased or owned	IFB owns the building, which cost about \$400,000.
Operating schedule/shifts	Two shifts per day, 6 days per week

- **Type of operation:** for-profit mattress dismantling and remanufacturing and furniture reupholstering
- **Start-up date:** 1984



Mattresses collected at drop-off site adjacent to landfill in Maryland.

15R, 1996



ILSR, 1996

Trailer left by International Furniture and Bedding to collect mattresses adjacent to landfill in Maryland.

Process (Continued)

Old mattresses are stockpiled on the first floor and fill this huge room. A forklift operator transfers them to the second floor where they are dismantled. All the old materials are either reused or recycled: springs, wood, foam, steel, cotton matting, ticking with foam, and tybar (the bottom backing of a mattress). Frames are repaired where possible as are springs. If wood and springs cannot be repaired these are recycled. New wood and springs are used to

augment the reusable parts. Old fabric and ticking is removed for recycling. The rest of the operation follows a conventional new mattress manufacturing operation. Cutters and sewers cut and sew new fabric for ticking. The mattresses are disinfected following conventional protocol and safety/health procedures. The finished mattresses are sealed in plastic and ready to be transported to markets.

Costs and Benefits

Capital costs	NA
Operating costs	NA
Cost for incoming mattresses	Mattresses are picked up for free. IFB generally does not pay for them.
Revenues	NA
Financing mechanisms	Private

Full-time equivalent jobs Approximately 64 jobs total. These include drivers, sewers, cutters, and reupholsterers. The mattress remanufacturing operation employs 50 full-time equivalent people; the reupholstering operation employs about 14 (this will increase as this part of the business expands). Many of IFB's employees fall into a "difficult-to-employ" category. IFB hired more work release people and ex-convicts than any other business in Baltimore in 1995.

Job skills required/training About half the jobs are skilled. The skilled jobs include the reupholsterers, the piecework employees, the sewers, and the cutters. IFB hires people with skills and trains its employees so they gain needed skills.

Employment benefits/wages Drivers make \$20,000 to \$30,000. Some of the piecework employees make \$600 to \$700 per week.

Price of new mattresses A double-sized mattress with box spring sells retail for about \$99, a queen-sized mattress and box spring sells for \$125, a single-sized mattress with box spring sells for \$89.

Replicability

Can operation be replicated	Yes, looking to replicate and expand and "go national."
Replication/expansion needs	Loans, financing help. IFB reports that it can replicate its plant by leasing 15,000 to 20,000 square feet and obtaining a \$100,000 investment.
Available to help replicate business	IFB is interested in franchising and teaming up with partners to replicate, and can help set up new plants and hire the right people. The company is interested in joint venturing with community-based organizations.

Tips For Replication

- Start out leasing building. This provides expansion flexibility as business grows.
- To spur mattress collection, advocate that mattress recycling count toward local recycling goals.
- Educate public on types of mattresses that can be recycled and the types that cannot.
- Investigate state work-release programs as way to build labor force.

L.A. Shares



In 1991, the LA Cultural Affairs Department created Materials for the Arts, a materials reuse program serving the City's arts community and modeled after the successful New York City program. In 1993, the Department decided to set up a separate stand-alone nonprofit organization that would serve more than just the arts community. L.A. Shares was thus borne. It is now the largest single donor to the school district, arts community, alcohol and drug recovery programs, parks and recreation, and senior citizens in LA County. L.A. Shares is a service distribution business, which acts as a free charitable pass-through organization. Local businesses and individuals donate unwanted items (that are nontoxic and in good working condition) to L.A. Shares, which in turn donates materials to nonprofit organizations and schools. These customers "shop" at L.A. Shares' showroom. L.A. Shares has decided against assessing a handling fee, because those with more money would be able to afford items and those most in need would not. Its mission is to help nonprofit organizations and schools throughout LA County by redistributing materials to them. Because L.A. Shares does not handle food,

clothing, or bedding, it does not compete with local thrift stores or charities.

L.A. Shares maintains computerized records of donors, items donated, value, and weight, as well as lists of recipients and needed items. In February 1996, it picked up 16.03 tons of materials valued at \$66,152 (the average dollar value per donation was \$2,544).

In 1996, L.A. Shares will coordinate "Be Instrumental," a special reuse event that will encourage residents to donate musical instruments to local area schools. It will host a concert with well-known musicians—the price of admission will be a musical instrument. In 1997, it hopes to run a similar program, "Be a Sport," targeted at sports equipment. A "reverse bat, ball, and glove night" is being planned at a Dodgers game. L.A. Shares hopes these will be annual events. Other plans for the future include instituting a job training program to teach young adults marketable skills.

More money would enable L.A. Shares to cope with increased supply and demand and associated costs. Funds would pay for more trucks and labor.

Bert Ball, Executive Director
L.A. Shares
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Los Angeles, CA 90027
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Fax: 213-485-9237

- **Type of operation:** nonprofit reuse operation
- **Start-up date:** 1993

Materials Handled, Collection, and Marketing Information

Quantities of discards handled	Approx. 270 tons per year (~80% is handled, ~20% is off-site brokering) plus major single donations often of "staggering proportions." For instance, L.A. Shares is helping to coordinate the give-away of the Long Beach Naval Yard Command Station properties, which are valued between \$30 and \$50 million.
Discards repaired/reused	Approximately 99% by weight
Incoming discards disposed	Negligible
Types of durable discards handled	Art, books, tools, toys, bicycles, electronics, lighting, housewares, appliances, furniture, office supplies, construction material, videos, arts and crafts, fabric. Office furniture and supplies are its most popular items.
Types of other materials handled	Paint, paper, arts and crafts
Sources of discards	Businesses, government, other institutions
Collection strategy/method	Donors have to schedule a pickup, and provide in advance a written inventory and value of items they want to donate. The two drivers pick up donations everyday. They tag (with a sticker) each item, indicating donor. L.A. Shares has also placed 40 cubic-yard containers (donated by WMI) at two high-volume sites, Paramount Pictures and SW Mill&Lumber.
Customers/end markets	Nonprofit organizations and schools (including theatre groups, boys and girls clubs, government agencies, recreation centers, community access television, churches, family and other social services, and Goodwill). More than 1,500 organizations have received goods.
Service area	The City and County of Los Angeles (467 square miles)
Marketing strategy	Initially, Bert Ball was very proactive in soliciting donations from local businesses such as department stores and hotels. He didn't wait for donors to knock on his door. A book listing the largest employers in LA became his "bible." Bert continues to send out materials and letters. L.A. Shares Board of Directors played a key role in opening doors and networking the organization. L.A. Shares is also listed as a reuse operation in the City's recycling directories.



A customer loads items into his pickup truck at dock, while L.A. Shares workers unload trailer full of donated items collected that day.



Customers signing in at front desk before "shopping."



ILSR, 1996

L.A. Shares is set up like a department store with items neatly and often creatively displayed for "shoppers." This shelf, itself a donation, displays various types of lightbulbs.

Tips For Replication

- Be proactive, not reactive, when soliciting donations and in-kind contributions.
- Set up a Board of Directors who can help network and open doors.
- Approach community relations departments at large corporations rather than Presidents.
- Pick up donations within a week; don't make donors do any extra work.
- Partner with local government.
- Run operation like a business.
- Never forget you're in warehousing and distribution business.
- Know business community. Read local news and be aware of business trends.

Process

Equipment used	Two Toyota pickup trucks with heavy duty shocks, two 14- to 17-ft. trailers, forklift, pallet jacks, dollies, fax machine, computers, belts, gloves, 7 40 cu. yd. containers for extra storage
Site/building description and size	L.A. Shares has three warehouses: (1) 8,000-sq.-ft. showroom, where customers shop, (2) 1,000-sq.-ft. building used for extra storage, 1 mile from showroom, and (3) 14,000-sq.-ft. building on the harbor used as off-site storage.
Site/building leased or owned	All three buildings are publicly owned and are donated to L.A. Shares for its use.
Operating schedule/shifts	8 hours per day, 260 days per year

L.A. Shares has hundreds of regular donors and adds new ones every day. To avoid becoming a disposal facility, L.A. Shares screens donations first via phone and fax and then via its drivers. Donors schedule a pickup, typically within a week, and have to fax an inventory and estimated values to L.A. Shares in advance. One of two drivers will pick up and tag the items (these stickers identify item and donor).

L.A. Shares maintains a wish list of its customers' needed items (anything from cameras to envelopes), which is updated weekly. If a driver picks up a load containing wish list items, he/she might be directed to the showroom rather than to the storage sites. All items are weighed and inventoried.

The showroom is set up like a department store. Customers have to register with L.A. Shares and provide a list of their funding

sources, Board of Directors, their elected officials, wish list, and information on their organization. Customers make an appointment to "shop" on one of two shopping days: Wednesday and Friday. Two people per group are allowed in at a time (every 15 minutes for a 45-minute shopping appointment). L.A. Shares is booked solid—25 groups per day. "No-shows" are bumped for 3 months—a strong incentive to honor appointments. L.A. Shares is about sharing the wealth, so it places limits on the number of items a group can take. Customers sign a liability release and are then given a clipboard with a worksheet on which they indicate items wanted and the donor for each. They have to bring their own equipment for transporting items. Customers have to write donors a thank you letter and send a copy to L.A. Shares. If they don't, they cannot come back and shop.

Costs and Benefits

Capital costs	Investment is minimal. Most equipment—trucks, forklifts, computers—have been donated.
Operating costs	Approximately \$250,000 per year (for salaries, insurance, incidental expenses)
Cost for incoming discards	All donated
Revenues	None. Reclaimed items are donated.
Financing mechanisms	The City (14%) and corporations, individuals, and foundations (86%). It receives many in-kind contributions such as banking and payroll services from the Bank of Los Angeles.
Full-time equivalent (FTE) jobs	6 FTE. Executive director, program administrator, two drivers, 1 warehouse manager, and two part-time shopping assistants.
Job skills required/training	Many of L.A. Shares employees were formerly on public assistance and had no marketable skills when they started. Skills learned include forklift driving, computers, and warehousing.
Employment benefits/wages	Drivers make \$8 an hour, the shopping assistants make \$6 an hour.
Price recipients pay for items	Nothing. All items are donated.

Replicability

Can operation be replicated	Yes. A similar operation would cost about \$200,000 or the equivalent in in-kind donations.
Replication/expansion needs	Labor costs are an obstacle to L.A. Shares expanding.
Available to help replicate business	Yes. Bert Ball is available to help others wishing to replicate L.A. Shares by doing site analysis, planning, identifying potential donors, and people to join Board of Directors.

Materials for the Arts



Materials for the Arts (MFA) is the nation's oldest municipally operated materials reuse program dedicated to the arts. It is a joint program of NY City's Department of Cultural Affairs and Department of Sanitation's Bureau of Waste Prevention, Reuse, and Recycling. Local businesses and individuals donate unwanted art and office supplies, office furniture and equipment, and other reusable items to MFA, who transfers these to nonprofit cultural groups; artists working in the public sector; community, health, and social services with arts programs; and city agencies. Recipients, who must be located in New York City, use contributions to improve facilities, teach classes, create theatrical sets and costumes, present art work, and hold events.

Contributions are tax deductible and MFA provides free pickups. Donations must be in

good condition and be actually usable. MFA does not accept broken items, mattresses, clothing, kitchen utensils, or small appliances.

MFA began as a "desk operation" in 1979. By 1980 it was using 3,500 square feet of donated basement space in Queens. In 1990, the warehouse moved to a 10,000 square foot space in Manhattan, adjacent to the City's central business district and convenient to the nonprofit groups it serves. MFA continues to expand and is planning to double its warehouse space, accept more donations, and offer more services to a more diverse customer base.

In fiscal year 1995, MFA transferred 1,316 donations from 888 businesses and individuals to 1,085 recipient organizations. These donations, valued at \$2.3 million, diverted 428 tons from landfill disposal.

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- **Type of operation:** government-run reuse operation serving the arts community of New York City and City agencies
- **Start-up date:** 1979

Materials Handled, Collection, and Marketing Information

Quantities of discards handled	428 tons in FY1995 (79 tons of this, 18%, represented direct donations)
Discards repaired/reused	95% or more by weight
Incoming discards disposed	5% or less by weight
Types of durable discards handled	Office furniture and equipment (desks, file cabinets, chairs, computers, calculators, etc.), technical equipment (video cameras, printing presses, projectors, etc.), construction materials (hardware, fixtures, etc.), individual items (tools, stereos, household furniture, vehicles, etc.)
Types of other materials handled	Paint, lumber, art and office supplies, paper, fabric, and other reusable/recyclable items
Sources of discards	Stores, manufacturers, law firms, construction companies, printers, other local businesses, and many individuals. In FY95, businesses donated 68.8% of tonnage, individuals-15.4%, nonprofits-14.4%, and City agencies-1.4%.
Collection strategy/method	Donors first call MFA. Staff write item, estimated value, and transportation specs on a donor sheet, which doubles as a pickup slip. Pickups are scheduled for acceptable items. Mover/drivers make the final determination on whether to accept items. MFA also directly matches recipients and donors via phone or by bringing recipients to the donor's location.
Customers/end markets	More than 1,800 groups have received materials: museums, performance companies, writers' groups, cultural centers, film groups, social service/community organizations with arts programs, and City agencies. Groups have to be registered with MFA.
Service area	Recipients: The five boroughs of New York City. Donors: the metropolitan area.
Marketing strategy	First two years: Letters to businesses requesting donations, personal visits, news conferences and releases, PSAs, print advertising, speaking. Now: Word of mouth.

Process

Equipment used	2 18' ft. trucks with lift gates, van, 2 hand trucks, about 2 dozen dollies, about 1.5 dozen canvas bins, other moving equip., shelving/display equip., IBM computers, and office equip.
Site/building description and size	10,000 square feet on 4th floor of warehouse, convenient to bus/subway service
Site/building leased or owned	Leased
Operating schedule/shifts	Warehouse staff work 8:00 AM to 4:00 PM. Administrative staff work 9:00 AM to 5:00 PM.



Customers "shopping" at Materials for the Arts warehouse.



ILSR, 1996

Computers, printers, and other electronic equipment displayed at the warehouse. Each item carries a tag indicating donor and value.

Process (Continued)

Mover/drivers load items into the warehouse; make any changes from the original list on the pickup sheet; and weigh items. The completed pickup sheet information is recorded into MFA's computerized system, which generates a label listing donor, code number, item, and date of entry into warehouse. Donors receive a thank you letter (for tax purposes), which describes items and the estimated fair market values as assigned by the donor.

Once materials are tagged, they are displayed in the warehouse, which is set up as a store. For instance, furniture, computers and related components, paint and varnishes, paper, and books are all in separate areas. Most items are laid out neatly on shelves. Others such as buttons and zippers are in bins.

Recipients (or customers) can "shop" on Tuesdays and Thursdays, 9:30 AM to 1:30 PM. They first have to register with MFA by sending request letter, their "wish list" of desired items, proof of nonprofit status, list of funding sources, Board of Directors, names of staff who are authorized to accept donations and sign contracts, and printed information on the organization. If the group meets all program criteria, MFA sends an official letter of

acceptance, contract, and warehouse rules. Once MFA receives the signed contract, the organization may participate.

Registered groups make appointments to shop (no more than 3 people per group). They first check in at the counter, where they receive a clipboard with worksheet for recording items wanted, and red tags, which they use to reserve wanted items. Shopping carts and other moving equipment are available; otherwise customers have to arrange for their own handling and transporting of items. MFA issues recipients computer-generated invoices (which includes donor names and addresses). If they are unable to take items with them, they must return the following shopping day (by appointment) to pick them up. Recipients have to mail a thank you letter to donors and send a copy to MFA. Thank you letters serve two useful purposes: donors recognize that items are put to use and recipients introduce their activities to contributors.

After 13 years of manual record-keeping, MFA has computerized its system. Its data base tracks incoming and outgoing items, along with recipient and donor information.

Tips For Replication

- Garner support of a government agency or nonprofit group: arts agency, community group, or corporation/foundation.
- Figure out community needs and customer base (need not be focused on the arts community).
- Assess local corporate interest. Educate CEOs about reuse. Businesses dump a lot of reusable materials.
- Form small but high-powered advisory committee of support.
- List possible contributors and recipients, and develop budget.
- Find warehouse with good access and convenient to customers.
- Investigate opportunities for volunteer help.
- Bond mover/drivers. Cover vehicles with insurance and maintenance agreements.

Costs and Benefits

Capital costs	Approximately \$150,000 in equipment (trucks, van, computers, other moving equipment)
Operating costs	\$360,000 per year (\$100,000 is for rent, taxes, and maintenance)
Cost for incoming discards	All donated
Revenues	No sales revenues
Financing mechanisms	DOS and DCA each pay about half of MFA's costs. Different City agencies provide in-kind contributions such as vehicle fuel and maintenance costs.
Full-time equivalent (FTE) jobs	8 FTE employees (director, assistance director, warehouse manager, warehouse helper, direct donations coordinator, administrative assistant, and two mover/drivers). 10 FTE interns.
Job skills required/training	All jobs are skilled. Interns, who are mostly high school students, receive training.
Employment benefits/wages	\$12.50 per hour to \$17 per hour. All employees receive full benefits per City of New York.
Price recipients pay for items	None. Materials are transferred to customers free of charge.

Replicability

Can operation be replicated	Yes. Needed are an active nonprofit sector, a civic-minded business sector, and folks willing to commit the time and energy to unite the two into a program.
Replication/expansion needs	MFA is seeking additional funds in order to offer more services. It plans to double its space.
Available to help replicate business	Yes. MFA has produced a step-by-step guide, <i>Starting a Materials Donation Program</i> and a video. MFA has helped establish LA Shares in Los Angeles, Materials for the Arts in Atlanta, and Arts Recycle Center (targeted at schools) in Chicago, to name a few.

Montgomery County, Maryland

Montgomery County is a large rural, urban, and suburban county with a population of 750,000 abutting Washington, D.C. The County operates a voluntary curbside recycling and yard waste collection program. In July 1992 it started recycling building and construction materials, and mattresses. Textiles were added in March 1993, and pickup of household furniture began October 1993.

Textiles, mattresses, and building and construction materials are accepted at drop-off locations adjacent to the County's Shady Grove trash transfer site. The textile and mattress collection sites are open 7 days a week. The local Salvation Army coordinates the County's MattressCycle program and transfers mattresses it cannot use to a MD-based mattress manufacturer, Beds Are Us. Building and construction materials are collected through the County's "Don't Dump, Donate!" program, which operates a public drop-off site Wednesdays and Saturdays (also adjacent to the transfer station). Residents and contractors can drop off bathtubs, windows, cinderblocks, bricks, lumber, unopened cans of paint, and

other reusable building materials. The Loading Dock, a nonprofit building material reuse operation serving the low-income community in Baltimore, Maryland, picks up materials about once a month. The County refers people with large loads directly to The Loading Dock, which will arrange for pickup.

The County sponsors a furniture pickup program with the Housing Opportunities Commission (HOC), an organization serving families who need homes. HOC collects furniture in good condition from residents on an on-call basis, and delivers these the same day to families.

The County also collects unwanted clothing directly from local charities. It contracts with Maryland Environmental Services (MES), a quasi-public organization, to handle all the logistics for textile recycling.

The County's reuse programs complement local charities and other organizations serving the needy.

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- **Type of program:** drop-off program for textiles, building materials, and mattresses; regular curbside collection of textiles for charities; on-call household collection of furniture
- **Start-up date:** March 1993 for textiles, mattresses, and building materials. Furniture collection started in 1990.

Materials Handled, Collection, and Marketing Information

Quantities of reusables handled	In 1995, 114 tons of textiles per year; 17 tons of mattresses per year; approximately 187 tons of furniture; and 50 tons of building and construction materials
Incoming reusables recovered	100 percent by weight
Incoming reusables disposed	0 percent by weight
Types of reusables handled	Textiles: Clean and dry old clothing, paired shoes, linens, drapes, blankets, towels, belts. Furniture: tables, chairs, sofas, beds, mattresses, box springs—in good condition. Building and construction materials: bathtubs, carpet, bricks, doors, windows, flooring, hardware, electric lights, wallpaper, lumber, kitchen cabinets, drywall, shingles, stairs, vinyl siding, water heater wrappers, and other materials. Mattresses: dry and unbroken mattresses, box springs, bed pillows, toss pillows, mats, foam rubber cushions, and carpet padding.
Types of other materials handled	Montgomery County also recycles glass, metal, paper, appliances, yard trimmings
Sources of reusables	Textiles: 25% from drop-off site, 75% from local charities. Furniture and mattresses: residents. Building and construction materials: 80% from residents, 20% from contractors.
Collection strategy/method	Drop-off for textiles, mattresses, and building materials. Using a 30-cubic-yard A-frame roll-off truck, MES weekly picks up textiles from two charities (Interfaith Clothing Center and Shepherd's Table). CASA brings its bags to Shepherd's Table for pickup, and another charity, C-4, calls MES when it needs a pickup. HOC picks up furniture from households on an on-call basis 3 days per week. The same day, it delivers furniture to families who need items.
Customers/end markets	Textiles: Dumont Export Corporation in Philadelphia. Furniture: HOC. Building materials: The Loading Dock. Mattresses: The Salvation Army and Beds Are Us, Curtis Bay, MD
Marketing strategy	The County produced special brochures on each of its reuse programs: textiles, furniture, MattressCycle, and "Don't Dump, Donate!" It also produced a booklet, <i>Use It Again, Montgomery County—A Household Guide to Waste Prevention By Repairing, Renting and Reusing Goods</i> , which lists more than 100 businesses and organizations who rent, repair, or reuse household items. The County distributes its outreach materials at libraries and County offices and also mails materials to residents upon request.



Sinks and windows collected through the County's Don't Dump, Donate! program.

ISR, 1996



Mattresses stored in trailer at site adjacent to County's trash transfer station.



The County's 30 cubic-yard roll-off truck is almost full after picking up textiles from Shepherd's Table and Interfaith Clothing Center.

Process

Equipment used	Textiles: Red plastic bags, 30-cubic-yard A-frame truck, roll-off truck at unloading facility. Furniture: HOC uses its own vehicle. Building materials: trailer at drop-off site. Mattresses: trailer at drop-off site.
Site/building description and size	No buildings are needed. Dumont and the Salvation Army provide trailers free of charge for material storage. HOC has limited space (1,000 square feet) in the basement of one of HOC's apartment buildings. It rents 3 tractor trailers, which it uses at its site as extra storage space.
Operating schedule/shifts	The Shady Grove public unloading site is open Monday through Saturday 7:30 AM to 8 PM, Saturday 7:30 AM to 5 PM, and Sunday 9 AM to 5 PM. Don't Dump, Donate! accepts materials Wednesdays, 1 PM to 4 PM, and Saturdays, 9 AM to 3 PM.

Textiles: Residents place plastic bags of textiles in a roll-off container at the public unloading site. Textiles must be dry and clean and free of mildew. Staff unload textiles into a 45-foot tractor trailer provided by Dumont. About once a month Dumont takes the full trailer and replaces it with an empty one. On Wednesdays, MES collects textiles from Interfaith Clothing Center and Shepherd's Table. C-4 calls MES when it needs a pickup, which is about every other Wednesday. MES provides charities with red plastic bags for their unwanted textiles.

Don't Dump, Donate!: Residents and contractors drop off unwanted building and construction materials. Materials that can be exposed to the "elements" are left outside.

Other items are stored in a trailer. The Loading Dock picks up materials about once per month.

Furniture: HOC picks up furniture on an on-call basis 3 days a week. Two workers go into homes to pick up furniture. They may turn down items not in good condition. HOC makes about 10 pickups and 5 deliveries per day. It provides furniture to 500 families per year.

Mattresses: Residents can drop off mattresses and other bedding materials 7 days a week at the transfer station. Items must be dry and unbroken. They are stored in a trailer until pickup by the Salvation Army, which takes those it can use and gives the rest to Beds Are Us for remanufacture into new mattresses.

Costs and Benefits

Capital costs	The County incurred nominal capital investment to start and implement its reuse programs.
Operating costs	Between July 1, 1995 and May 31, 1996: textiles—\$88/ton gross costs (\$8/ton net costs); furniture—\$20,000 toward HOC's \$50,000 operating costs; mattresses—\$588/ton (\$8,773 for 14.92 tons); building materials—\$447.97/ton (\$17,632 for 39.36 tons).
Cost for incoming textiles	All reusables are collected free of charge from residents, charities, and others.
Revenues	Dumont pays \$80 for each ton of textiles. No revenues received for other materials.
Financing mechanisms	Funded from the County's solid waste management budget.
Full-time equivalent (FTE) jobs	Two people spend about 10 hours total a week collecting and handling textiles. On Wednesdays and Saturdays, 2 to 3 people staff the Don't Dump, Donate! site. HOC employs 1 FTE plus a day laborer 3 days per week for its household furniture pickup program.
Job skills required/training	No special skills aside from truck driving
Employment benefits/wages	NA
Price end users pay for reusables	\$80 per ton for textiles, zero for other materials

Replicability

Can program be replicated	Yes
Replication/expansion needs	Montgomery County would like to collect more textiles. One obstacle is logistics of feeder sites. They must have sufficient tonnage to make pickup cost-effective.
Available to help replicate program	Rick Dumont is available to help other communities set up similar programs.

Tips For Replication

- Get list of textile recyclers from the Textile Recycling Council. They're all different. Find one that suits your needs. Issue competitive bid for textile recycler to take collected textiles.
- Do not spare money for education. Good education results in better response and quality of materials.
- Actively solicit support and participation of local charities.
- Be creative and look for new ideas.

Recycletown

Since 1985 Garbage Reincarnation has run two reuse/recycling depots in Sonoma County, California (pop. 400,000) under contract with the County. One is at the County's central landfill on Mecham Road and the other at the Healdsburg Transfer Station, 30 miles north.

The depot at the central landfill features a "wild west" retail operation called Recycletown. It accepts and recycles used oil, paint, batteries, newspaper, glass, aluminum, tin, steel, copper, scrap metal, appliances, furniture, toys, paint, clothing, bicycles and bicycle parts, furniture, mattress foam, mattresses, building materials, stereos, lamps, and anything else reusable.

With the exception of a few trusses, Recycletown's four buildings are made entirely from salvaged building materials. The General Store, otherwise known as the furniture shed, is a basic pole barn structure built around discarded telephone poles. Other buildings include a "Kitchen," which sells miscellaneous household items, and a "Library," which sells used books. Building materials are sold outside in a "corral." People want to come to Recycletown—for community, for fun, for materials, to avoid disposal costs, to tinker.

Recycletown supports the noble art of tinkering, which as Pavitra Crimmel points out is a past-time that "is fast dying as products become less readily repairable and we succumb more and more to the hypnotic lure of the throwaway society." Recycletown has become a gathering place for tinkering ideas and storytelling. Garbage Reincarnation publicizes how to repair and create new products out of the old.

Recycletown evokes creativity and draws to it a number of artists and sculptors. From the very beginning, Garbage Reincarnation has held a yearly event called The Annual Junk Art Sculpture Competition, also known as Scrupture. The rules are simple. Sculptures must be made of discards, brought to Recycletown and taken away after the event. This competition tells the story of reuse in a way that no words can—people see that garbage isn't what they think it is. Scrupture is a dynamic educational and promotional event. The 1996 contest will give awards in several categories including junk art, scrap craft, creative costume, and creative builder.

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- **Type of operation:** community oriented nonprofit multi-material recycling and reuse "town"
- **Start-up date:** Garbage Reincarnation has operated reuse depots at the landfill and transfer station since 1985. It started building Recycletown in 1992. While it opened for business in 1992, the buildings were completed in 1994.

Materials Handled, Collection, and Marketing Information

Quantities of discards handled	Recycletown sells about 30 tons a month of just reusable items (plus 243 tons per month of recyclables). The Healdsburg depot sells about 14 tons per month of reusables (plus 91 tons per month of recyclables).
Discards repaired/reused	About 11% by weight of incoming materials are reused; 85% is recycled, mostly scrap metal
Incoming discards landfilled	Recycletown landfills about 10 tons per month total (about 4% by weight of all materials).
Types of durable discards handled	Anything reusable such as bicycles, lawn mowers, furniture, electronics, building materials.
Types of other materials handled	Scrap metal, glass, plastics, and other recyclable materials
Sources of discards	Self-haulers (including individuals) on their way to the landfill or transfer station. Thrift Stores also bring in materials they cannot sell. About half of the estimated 300 self-haulers going to the landfill each day, stop at Recycletown to unload reusable or recyclable items.
Collection strategy/method	Self-haulers bring in materials.
Customers/end markets	Tinkerers, collectors, do-it-yourselfers, artists, bargain hunters, hobbyists, gardeners, homeowners, landlords (who buy lots of building materials), repair shops
Service area	Largely Sonoma County; anyone can come shop
Marketing strategy	98% by word of mouth. Spends some money on classified ads. Paint exchange receives a lot of press, as does Scrupture. Perhaps most importantly, Recycletown is interesting and fun. People want to come back.



Recycletown features a wild west motif, which appeals to Californian nostalgia about the wild west.

Garbage Reincarnation



Garbage Reincarnation

Building materials yard



Garbage Reincarnation

Recycletown's garden and totem poles. "The Tower of Babel" is in the foreground. The TVs have dioramas in them.

Process

Equipment used	Little equipment used: truck to take trash to landfill and a County-owned forklift
Site/building description and size	Recycletown consists of 4 buildings on a 3-acre site.
Site/building leased or owned	Recycletown is on County property
Operating schedule/shifts	Recycletown is open 7 AM to 3:30 PM, 7 days a week, same hours as landfill

Recycletown is located on a terrace; building materials are sold in an outside area below the town; and appliances are collected in a separate area. Self-haulers bring in reusable materials before unloading at the landfill. Recycletown is the last stop for potentially reusable items before they are landfilled. Even thrift stores bring items that they cannot sell. The County's landfill tip fee is \$31 per ton. (Recycletown does not weigh items, although the County will soon be putting in a scale.) If haulers have building materials, they drive down to Recycletown's lower level to unload these. This site has racks for windows and doors and pickup truck beds for other types of materials. People bringing in items are responsible for placing them in the appropriate areas. The same is true for electronics, books, toys, clothes,

furniture, and other household items. The idea is to get people to take responsibility for their unwanted discards. The drop-off process is a casual and frequently fun affair.

Electronics, books, clothes, and furniture are sold in separate buildings. Toys and miscellaneous household goods are sold in enclosed areas between the buildings. Most items are bargains and sell for under \$10. Recycletown rarely sells items for more than \$20. Pricing is ad hoc. Often shoppers pick out items they want and place them in a pile. Recycletown staff will then sell the pile for some negotiated price. There is no cash register. Transactions are made directly in the sales areas.

Costs and Benefits

Capital costs	Minimal. The building trusses cost about \$200.
Operating costs	Approximately \$25,000 per month (\$20,000 of which goes toward salaries)
Cost for incoming discards	Free
Revenues	Approximately \$29,000 per month (one-third from County, the rest from materials revenues). While reusables make up 11% of materials, they account for 73% of sales revenue.
Financing mechanisms	Sales revenue and County contract of \$9,654 per month for Recycletown and Healdsburg
Full-time equivalent (FTE) jobs	Garbage Reincarnation employs 10.5 FTE. 5 FTE at central landfill (project director, 1 at appliance site, 1 at recycling site, 1 at Recycletown, and 1 person who is a "floater." 2 FTE work at the Healdsburg depot. Other employees work on other projects. Recycletown has some dedicated volunteers, who work two to three times a week. For instance, one volunteer cleans up the Library, a few clean up the electronics area.
Job skills required/training	Workers are very knowledgeable. They know what materials to accept, how to make items look good for sale, and are able to lift heavy items.
Employment benefits/wages	\$8.50 to \$12.50 an hour
Price recipients pay for items	Most items sell for \$1 to \$10 each.

Tips For Replication

- Find individual who can spearhead program.
- Sell nostalgia that relates to local community. Californians are nostalgic about the wild west.

Replicability

Can operation be replicated	Yes
Replication/expansion needs	Recycletown will soon be expanding.
Available to help replicate business	Yes. Staff are available on a consulting basis.

The ReStore

THE
RESTORE

In 1989, Connie Leach founded Restore Resources Unlimited, a nonprofit corporation that promotes reuse and the redistribution of resources back into the community and economy. In August 1990, it launched its first reuse project, The ReStore, which has since become widely known as Vermont's outlet for reusable commercial surplus. Its second project, TOY JOY, followed in November, and collects good quality used toys from central Vermont area families and redistributes them to needy families at holiday time. TOY JOY is now sponsored by another organization, and Restore Resources Unlimited focuses solely on operating The Restore.

In December 1994, the retail facility relocated from a third-floor retail space in downtown Montpelier to a 500-square-foot space in a commercial strip on Barre-Montpelier Road (next to Cody Chevrolet). Although small, the space provides high visibility and convenient parking. The ReStore's business has continued to grow and prosper at this location. Monthly sales revenue for the first five months of 1996 averaged more than \$2,500, as compared to \$511 in December 1994. As a result of this growth and a grant from the American Plastics

Council, The ReStore will move July 1st, 1996, to a 3,200 square foot retail and warehouse space, formerly the local food cooperative.

The ReStore provides a cost-effective alternative to disposal for surplus and by-products generated by Vermont's private sector. This surplus can be anything from manufacturing scrap, to packaging, excess inventory or equipment, or damaged or flawed product. The ReStore also accepts clean items from households. These include corks; candle stubs; colorful magazines; egg cartons; buttons; cardboard tubes from toilet paper, paper towel, and tape rolls; styrofoam packing peanuts, bubblewrap, and other soft packing materials; and brown paper grocery bags.

Materials are collected at no charge from all types of businesses throughout the state, who can claim a tax write-off for their donation.

The ReStore offers the opportunity for consumers to purchase "used" over new. A significant portion of inventory are items such as wood turnings, fabric cuttings, paper, containers and buckets, and video tapes. As a result, educators, parents, and artists make up a significant portion of its customer base.

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- **Type of operation:** nonprofit reuse operation specializing in art and educational supplies
- **Start-up date:** August 1990

Materials Handled, Collection, and Marketing Information

Quantities of discards handled	35 tons per year
Discards repaired/reused	97% by weight
Incoming discards disposed	3% by weight
Types of durable discards handled	Pegs, knobs, thread spools, beads, marbles, wheels, candle holders, buttons, old lamps, lighting fixtures, misc. hardware and tools, tins and buckets, file folders, 3-ring binders, ceramic tile, and "other delectable trinkets"
Types of other materials handled	Paper, fabric (no old clothes), stickers, yarn and thread, egg containers, corks, ribbon, candle stubs, magazines, styrofoam peanuts and other packing materials, mailing labels, (and other recyclables/reusables that are not necessarily durables)
Sources of discards	All types of businesses including manufacturers, retailers, office buildings, car dealerships, restaurants, hospitals, artisans, and small entrepreneurs. The ReStore also accepts clean materials from households.
Collection strategy/method	Staff pick up surplus items from businesses either by using their own vehicles or renting a vehicle. They make routine pickups in specific commercial districts. On average The ReStore gains one new donor a week.
Customers/end markets	General public (mostly teachers, childcare providers, parents, artists, crafters, and children)
Service area	Due to transportation costs, most surplus sources are within 50 miles, though staff occasionally do "milkrun" pickups farther away.
Marketing strategy	Contacts businesses directly emphasizing how The ReStore can help cut their disposal costs and provide a tax deduction for their contributions. Places ads. Prints a catalog for buyers. Vendor at school conferences, business conventions. Word of mouth. Feature stories in business journals.



The ReStore, Montpelier, Vermont

The ReStore, 1996



The ReStore, 1996

Reclaimed goods on sale at The ReStore in Montpelier, Vermont.

Tips For Replication

- In rural environment, direct link with education sector is useful.
- Convenient parking essential as people want to be able to load their vehicles with stuff.
- Tag lines are useful but can limit customer base. The ReStore switched its tag line in 1995 from "Art and Educational Supplies" to "Surplus Materials for Many Reuses."
- Make it convenient and cost saving for businesses to donate.
- Increase your market by providing hands-on workshops with inventory at community events.
- Develop samples of value-added products, how-to kits using inventory, and so forth, to interest those who need finished products rather than raw materials.

Process

Equipment used	Rental truck (max. 2 times/year), display units, shelves and drums for holding/displaying goods in store, scale, cash register, ladder
Site/building description and size	Two-room 500 sq. ft. retail store; 1,500 sq. ft. unheated warehouse at separate location. New space: 1,600 sq. ft. retail space; 800 sq. ft. storage space; 800 sq. ft. office and workshop
Site/building leased or owned	Leased
Operating schedule/shifts	The ReStore is open Monday to Friday, 10 AM to 5 PM, and Saturday, 10 AM to 1 PM

Materials are collected (currently at no charge) from all types of businesses throughout Vermont. Households wanting to donate materials can drop these off at the store. The ReStore gives out a list of materials acceptable from households and asks people to call first if they have items to donate that are not listed.

Staff take collected items directly to the store or the warehouse. Items are priced and stocked in the store. Materials are inexpensively priced. The staff's desire to provide schools with a unique "green" source of low-cost art and educational supplies, has meant pricing some inventory below the cost of acquiring it.

The stock is continually changing. In April 1996, The ReStore's sales inventory included

ceramic flower pots at 25¢ each, scraps of fleece fabric at \$1.50 a pound, blank video cassettes at 50¢, sheets of cloth from a Burlington sailmaker, steel wire, plastic tubing, thousands of laminated placemats, 8 million safety pins, hundreds of glass test tubes with rubber stoppers, and 3-ring binders.

The store is open to the public Monday through Saturday. Most materials are unpackaged in large recycled drums to allow customers to select only the amount he/she really needs.

The ReStore has also created an inventory sheet designed for schools, day cares, and other groups who use large quantities of materials in art and educational projects. In fall 1996, it will offer several hands-on educational kits.

Costs and Benefits

Capital costs	\$500 for used display units, telephone, warehouse shelving, workshop tables
Operating costs	\$38,220 budgeted for fiscal year 1996 (\$24,400 for staff, \$63,00 for rent, \$2,250 for vehicle rental and mileage, \$750 for ads, \$1,100 for insurance, and \$3,400 for telephone, supplies, postage, printing, accounting, and sales tax). With move, operating costs are expected to increase to \$54,200 in fiscal year 1997.
Cost for incoming discards	They are all donated. The ReStore incurs transportation costs to pick up items.
Revenues	\$52,200 expected for 1996 (\$33,000 from ReStore sales, \$5,000 from public/government support, \$10,000 in corporate contributions, \$1,000 from events, \$2,000 in donations, \$1,200 from tenant)
Financing mechanisms	Materials sales augmented with other support from government and corporations.
Full-time equivalent (FTE) jobs	2 FTE. The ReStore has five part-time employees.
Job skills required/training	The manager has business management, sales, and communications skills, plus a sense of humor. Clerks have sales skills and are educators, artistic, and creative.
Employment benefits/wages	Clerks start at \$6 an hour and receive no paid benefits, although they do receive \$50 worth of inventory annually. Part-time manager earns \$12,000 a year.
Price recipients pay for items	Varies by item. Goods are generally inexpensively priced.

Replicability

Can operation be replicated	Yes
Replication/expansion needs	More space, satellite facilities, further diversify inventory
Available to help replicate business	Staff time is the ReStore's most scarce resource. They will gladly answer questions by phone.

St. Paul, Minnesota

St. Paul's citywide curbside collection of textiles and reusable household goods is the first of its kind in the country. The unique program is a collaborative effort of the St. Paul Neighborhood Energy Consortium (NEC), Goodwill Industries/Easter Seal Society, and the City of St. Paul.

NEC, a nonprofit organization dedicated to citizen involvement in sustaining our planet, manages St. Paul's curbside recycling service. Goodwill serves people with disabilities or disadvantages. In 1992, NEC was looking to add materials to St. Paul's recycling program. At the same time, Goodwill was looking at alternative ways to increase donations as it was removing its drop-off boxes throughout the city because of increased contamination. A Goodwill survey indicated that 75% of St. Paul residents donate items to a charity three times per year or more, 51% of people making donations would prefer curbside pickup, and 65% would not go more than 10 minutes out of their way to make a donation. Thus, in July 1992, the City, NEC, and Goodwill started a pilot program targeting 9,000 households. It now serves 76,000 households. (One City district operates a separate but similar program serving 6,000 households.)

Under the program, NEC contracts with a local recycling hauler, SuperCycle Inc., to collect all

types of recyclables. Residents are asked to place their household goods and good clothes in separate bags from their "clean rags." They can use specially designed stickers for each of these categories or label bags themselves. The stickers include a receipt indicating donation to Goodwill. SuperCycle off loads bags at a staffed Goodwill trailer located at SuperCycle's processing yard. Once full, Goodwill takes the trailer to its processing facility for sorting and distribution. Goodwill is the program's exclusive market for reusable materials.

Scavenging at curbside has been a problem; especially when the program first began. NEC alerts residents about this problem and asks them to set out materials for pickup in the morning rather than the night before. NEC also tries to get license plate numbers of offenders so it can prosecute.

The household goods and textiles collection program has benefitted all parties. Residents benefit from the ease of curbside pickup for their reusable donations, Goodwill benefits from additional donated materials, and textile reuse markets benefit from the additional high-quality materials provided.

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- **Type of program:** curbside collection of textiles and reusable household items in conjunction with the City, Goodwill Industries, and a local nonprofit organization
- **Start-up date:** Pilot started July 1992, program became citywide October 1994

Materials Handled, Collection, and Marketing Information

Quantity of household goods handled	In FY95 (Oct. to Sept.), 168 tons of textiles and reusable items were collected at curbside.
Incoming household goods reused	92% by weight
Incoming household goods disposed	8% by weight (bags, broken items, and other unusable materials)
Types of textiles handled	Clothing (wearable and damaged/ripped), linens, towels, curtains, table cloths, blankets, rags. All cloth must be clean, dry and free of paint, grease, gasoline, mildew, and odors. No cloth pieces smaller than 5" x 5" are acceptable.
Types of other materials handled	Books, small appliances (must be working), hardware and tools, unbreakable kitchen goods, games, and toys. All items must be in good condition and good enough for someone else to use. Unacceptable are: items bigger than a bag, chemicals, plastic bags, and cosmetics.
Sources of textiles/household goods	Residents in 76,000 1- to 12-unit households
Collection strategy/method	Residents are asked to (1) fill up their own 30-gallon plastic bags with textiles and household goods, (2) close the top tightly, (3) clearly mark the bags in some way (such as taping paper tags, affixing provided stickers onto bags, or writing on the bags with a marker), and (4) place bags next to their blue recycling bin on their recycling day before 7:00 AM. Collection crews leave new stickers in recycling bins when they collect a full bag. Bags are collected simultaneously with other household recyclables twice a month. They are placed with corrugated cardboard in a cage atop a side-loading compartmentalized recycling truck.
Customers/end markets	Goodwill Industries. Goodwill ships bales of unsaleable textiles to textile recycling markets.
Marketing strategy	NEC produced and mailed to every household, a brochure entitled, <i>From Your Closet to the Curb Year 'Round</i> . Its newsletter, the <i>St. Paul Curbsider</i> introduced the program when it first began. NEC's <i>The 1996 Recycling Guide</i> , <i>Life's Little Recycling Instruction Book for St. Paul Neighborhoods</i> includes information on the program and stickers.



Residents setting out recyclables on collection day. The Goodwill bag shown here was used prior to development of the sticker system.



NEC

SuperCycle collection worker placing bag of household goods in cage atop recycling vehicle



NEC

Worker at Goodwill's processing center sorts bag of clothing collected at curbside

Process

Equipment used	Goodwill: 2 trailers, 14 to 16 gaylord boxes, 10 pallet jacks, 2 forklifts, 6 docks, sorting equipment, balers (Goodwill uses other vehicles and equipment for its "normal" operations)
Site/building description and size	Goodwill's St. Paul facility accepts, salvages, and transfers donations to 11 stores in southern Minnesota. This "hub" is a large warehouse with sorting equipment, 6 docks, and offices.
Operating schedule/shifts	The warehouse operates 3 to 4 days a week. Goodwill's stores are open 7 days a week, 7:30 AM to 9:00 PM.

SuperCycle takes collected materials to its yard for processing, where Goodwill has a 40- to 42-foot trailer. Bags of reusable household items, good clothes, and clean rags are handed to the one attendant at this "Attended Donations Center Trailer." SuperCycle's trucks are weighed after each off-load. Goodwill's trailers are insulated refrigerator ones, and are serviceable year-round, even during St. Paul's cold winters. When the trailer is full, which is every day or every other day, it is taken to Goodwill's 12,000 plus ton-per-year processing center, where the curbside materials are sorted along with Goodwill's other donations. Workers sort materials into two categories: saleable and unsaleable. Saleable items are

transported to Goodwill stores throughout southern Minnesota. Textiles considered unsaleable are baled for sale to textile graders. Clothes that do not sell after 4 weeks are sent to Goodwill's retail store, Diggers' Delight, where all clothes sell for 50¢ a pound. Clothes that still don't sell are baled for textile recyclers.

The contract with Goodwill contains a voucher system clause that allows other charitable organizations in town to obtain materials from Goodwill free of charge if the program interferes with materials they would normally receive. As of June 1996, no other charities have asked for a voucher.

Costs and Benefits

Capital costs	The City and NEC incurred no capital costs to add textiles and reusable household items.
Operating costs	NEC pays SuperCycle Inc. \$79 per ton for curbside collection of all types of recyclables (including textiles and reusable household goods). Goodwill incurred \$1,552,298 for all of its collection-related operating costs (admin., transportation, attended sites). It processed 24,676,179 pounds in FY95, of which 335,741 pounds were from curbside collection.
Cost for incoming household goods	Textiles and reusable household items are collected free of charge from residents.
Revenues	Goodwill retains all revenues from sale of materials.
Financing mechanisms	Textiles and household goods are integrated into the City's recycling program, which is funded by the City.
Full-time equivalent (FTE) jobs	Goodwill's St. Paul processing facility employs 45 FTE (10 drivers, 20 dock workers, 15 collection attendants, and a collections manager). 1 FTE is devoted to curbside materials.
Job skills required/training	Some jobs are skilled such as forklift/baler operators and drivers, who have Class A licenses.
Employment benefits/wages	Most of Goodwill's employees earn \$5.50 an hour, and after 90 days receive medical, vacation/sick leave, and life insurance.
Price end users pay for materials	Goodwill sells tops and bottoms for \$3 each, good suits and coats may sell for \$7 to \$15 each.

Replicability

Can program be replicated	Yes
Replication/expansion needs	NEC hopes to eventually offer regular service for reusable household goods to households with 12 or more units. It has tried a few pilot programs, which have not been successful for a variety of reasons.
Available to help replicate program	Yes. Goodwill is especially glad to help out other Goodwill operations.

Tips For Replication

- Work with local charities.
- Be willing to spend time hammering out details of program with all involved parties.
- Set up anti-scavenging program and alert public that scavenging is an issue.
- Work with real estate companies to help publicize program. They know people moving in and out of community—people who often discard valuable items.

The Surplus Exchange

In many ways The Surplus Exchange (SE) of Kansas City, Missouri exemplifies the model that many reuse operations around the country strive to achieve. SE has a priority system where reuse of an item as originally intended is its ultimate goal. Items that are not reusable or refurbishable, are recycled as completely as possible, capturing its highest possible value.

SE's warehouse is set up like a retail office goods establishment. Customers have to be members of SE, and to qualify to join, they have to be a nonprofit organization (NPO). About 1,200 area nonprofits are SE members. They pay a one time only membership fee of \$50, which entitles them to shop at SE's store to

their hearts' content—purchasing goods at substantially reduced prices. On designated days, the warehouse is open for shopping to the general public.

Product sales support almost all of SE's daily operations. SE has received some grant and foundation funding for expansion projects.

SE handles all types of office goods and furniture as well as medical and industrial equipment and arts materials. It has a significant electronics reuse operation with four technicians who diagnose, sort, repair, and dismantle computers and other electronics.

Rick Caplan, Executive Director
The Surplus Exchange
1107 Hickory
Kansas City, MO 64101
Phone: (816) 472-0444
Fax: (816) 472-8105
E-mail: danab@coop.crn.org

- **Type of operation:** nonprofit reuse and repair operation serving nonprofit organizations with office furniture, computers, and other materials/equipment
- **Start-up date:** 1984

Materials Handled, Collection, and Marketing Information

Quantities of durables handled 22,750 cu. yds. (1,300 tons) per year of electronics; 17,250 cu. yds. (1,030 tons) per year of nonelectronic goods

Durables repaired/reused Approximately 70% (SE is seeing a trend of more obsolete equipment of no use to end users. These items are either demanufactured at SE's facility, sent to processors, or sold to brokers.)

Incoming durables disposed 4% by weight (computer plastic casings, broken wood furniture)

Types of durables handled Everything (as long as it is not hazardous)—desks, chairs, couches, book cases, credenzas, file cabinets, tables, carpet, office supplies, office partitions, retail fixtures, shelving, mainframe computers, PCs, copiers, fax machines, cash registers, electronic parts of all kinds, stereo equipment, microwave ovens, vending machines, medical equipment

Types of other materials handled Office supplies, art materials

Sources of durables Area businesses, municipalities, hospitals, schools, and individuals in metropolitan area

Collection strategy/method Two crews (each with two drivers and two helpers) pick up electronics and other materials from donors five days per week, using a 24-foot truck. Pallet jacks, forklifts, and other material handling equipment are used as needed.

Customers/end markets Primary customers are area nonprofits. The remainder is made available to general public end users, brokers, and wholesalers. Brokers and wholesalers market equipment for reuse nationally and internationally. SE sends any rejects to processors for salvaging.

Service area End users are generally in the Kansas City area. Wholesalers, brokers, and processors are local, regional, and national.

Marketing strategy Direct mail, internet and direct phone calls, press releases, special events such as charity sales

Process

Equipment used 2 24-foot trucks, pallet jacks, forklifts, other material handling equipment; fully equipped tech shop for computer reclamation (includes diagnostics and repair equipment, demanufacturing facility uses manual and air tools. Other: woodworking equipment.

Site/building description and size 46,000-sq.-ft. 6-story warehouse with dock, centrally located in industrial area. It is functionally obsolete (one elevator, too small, poor loading and design for material handling).

Site/building leased or owned Owned

Operating schedule/shifts 8:30 AM to 5:00 PM, five days per week, all year minus major holidays



Chairs on display at the Surplus Exchange

158, 1995



ILSR, 1995

Desks ready to be given away to nonprofit organizations

Process (Continued)

Local businesses, institutions, and individuals call Surplus Exchange reporting items to be picked up. The warehouse manager schedules the item pickup, which is free of charge to donors. Collection crews deliver items to SE's warehouse. Electronics are sorted, tested, and inventoried. Electronics deemed suitable for end users are sent to the tech shop for further testing and repair. Non-electronic items such as furniture are sorted and sent to specific floors for display. Repaired items are also displayed.

items go through a lengthy process before being thrown away. Items to be brokered are sent to the third floor, where broadcast faxes and phone calls are made to find buyers. Electronic items deemed non-saleable (based on prior experience with like items) are evaluated to determine if the cost of dismantling is worth the higher value of individual parts. If so, they are sent to SE's demanufacturing crew; if not, they are stored for shipping to an electronics processor.

Unusable items are either sent to a demanufacturing crew or to the dumpster. All

Costs and Benefits

Capital costs	SE has no record of the original costs. The organization began in the founder's garage. SE estimates start-up costs for a similar operation at about \$250,000.
Operating costs	\$707,000 1996 budget
Cost for incoming durables	Durables are all donated. SE purchases new or refurbished parts for repairing computers.
Revenues	SE raises enough funds to cover its operating costs.
Financing mechanisms	Product sales, membership fees, grants
Full-time equivalent (FTE) jobs	19.5 FTE; 18 full-time, 3 part-time, 2 non-student volunteers. <i>Full-time:</i> Executive Director, Comptroller, Development Director, Nonprofit Salesperson, General Public Salesperson, Administrative Assistant, Warehouse Manager, 1 Warehouseman, 2 drivers, 2 driver helpers, 4 technicians, 2 demanufacturers. <i>Part-time:</i> Technician, general repair person, repair and construction. In addition, hundreds of individuals are trained at SE each year, providing an additional source of labor. For instance, in 1995, Goodwill, the Rehabilitation Institute, and other advocacy agencies used SE's facility for assessments and training.
Job skills required/training	Two technicians have degrees. The other two are self taught, but first volunteered for SE and were supervised by degreed technicians. With exception of networking, training is informal and in house. The warehouse manager or the part-time furniture repair crew provide training.
Employment benefits/wages	Wages range from \$12,480 to \$25,000 per year. Benefits include vacation, personal/sick days and medical/dental care.
Price recipients pay for durables	Usually 25% to 75% below market rate. If a NPO does not have funds, SE asks that they volunteer. If they cannot volunteer, sometimes SE donates the equipment. Computer purchasers are given a 90-day warrantee for refurbished items and a 1-year warrantee for new equipment, which SE sells to meet the demands of its customers.

Tips For Replication

- Understand trends in marketplace.
- Don't promise more than you can deliver.
- Contact Surplus Exchange.

Replicability

Can operation be replicated	Yes
Replication/expansion needs	Surplus Exchange will be offering more training for the disabled, processing of older more obsolete electronics and building of new systems. It is in the process of acquiring a larger, modern facility and more financial resources to achieve these ends.
Available to help replicate business	Yes. SE offers fee consulting services, plus will provide tours and participate in workshops.

Urban Ore

Urban Ore is a retail business that receives and salvages materials that would otherwise end up in the landfill. Initially, with permission, Urban Ore salvaged materials from the Berkeley landfill. It set up a sign, "Drop Metals Here," and people did. In those days, all Urban Ore had was a pickup truck and a sales area on the landfill site. Today, about 15 percent of the materials sold at Urban Ore are salvaged from the Berkeley transfer station (the landfill closed in 1983). Residents and local businesses bring in most of the rest, motivated by Urban Ore's willingness to buy most of what it sells.

Urban Ore operates several divisions: the General Store, the Building Materials Exchange (BMX), Salvage and Recycling, the Arts and Media Exchange (AMX), Outside Trader Division, and a Special Projects Division. Its operations are combined in one site, called the Discard Management Center, four blocks from the refuse transfer station, on 2.2 acres of commercial land. The Store sells household and commercial goods, BMX sells salvaged building materials, and AMX sells electronics, arts,

books, records, and other delicate items. The Outside Trader Division does limited pickup service, including curbside collection of reusables from households in conjunction with the City's annual bulky trash collection program. Salvage and Recycling salvages at the transfer station as well as dismantles nonreusable items for recycling. Urban Ore has some offices in the General Store. The Special Projects Division does some consulting and industrial activism.

Urban Ore represents a high-volume reuse enterprise with a wide range of value. It supplies many low-volume, high-value reuse entrepreneurs, including secondhand stores and remodeling contractors.

Urban Ore exemplifies the green civic-minded business. Its overall purpose is total recycling and ending the age of waste. It benefits the community by creating high-paying jobs; diverting discards to their highest and best use; and paying residents and businesses \$250,000 a year for their reusables.

Dan Knapp, President and General Manager
 Mary Lou Van Deventer
 Special Projects Manager
 Urban Ore
 1333 6th Street
 Berkeley, CA 94710
 Phone: 510-232-7724 or 510-235-0172
 Fax: 510-235-0198
 E-mail: urbanor@aol.com

- **Type of operation:** high-volume retail reuse operation
- **Start-up date:** 1980

Materials Handled, Collection, and Marketing Information

Quantities of discards handled	Approximately 3,500 tons per year (600 to 700 tons per year are from the transfer station)
Discards repaired/reused	Approximately 73% by weight (another estimated 25% is recycled)
Incoming discards landfilled	Less than 2% by weight
Types of durable discards handled	BMX: doors, bathtubs, sinks, windows, other building materials. Store: cabinets, hardware, furniture, clothing, household and commercial goods. Art & Media: electronics, records, arts
Types of other materials handled	Salvage & Recycling: all types of materials. Store & Art & Media: books, magazines, etc.
Sources of discards	Businesses, individuals, haulers, salvaging directly at the transfer station
Collection strategy/method	Urban Ore sources discards three ways: (1) salvage at transfer station; (2) individuals, haulers, businesses bring in materials; (3) limited pickup service.
Customers/end markets	General public and secondhand goods buyers. Urban Ore supports many individuals and enterprises that earn a living from repairing or otherwise recycling secondhand goods.
Service area	San Francisco Bay area. Most suppliers are within a 10-mile radius.
Marketing strategy	Advertises in classified sections for buyers, and in upscale publications for suppliers. Spends about \$250 a week on advertising. It advertises, "Ecological disposal for reusable goods."

Process

Equipment used	Three used trucks, two forklifts, computers and radio gear, bins, several movable buildings
Site/building description and size	Salvage: 600 sq. ft. at transfer station; BMX: 1.5-acre open site on commercial property; The General Store: 17,300 square feet of warehouse space on 2.2 acre site that includes BMX
Site/building leased or owned	BMX and the Store: pays market-rate rents (\$15,000 per month)
Operating schedule/shifts	Open 7 days a week, 8:30 AM to 5 PM



Sinks at Urban Ore's Building Material Exchange.



Many customers are professionals. Here, a contractor cuts glass for an historical restoration. He needed old wavy glass that is no longer manufactured.



Urban Ore

Salvager holding chairs at transfer station. The salvager's job is to find items that are good as is, can be repaired, or in any event can be sold. He or she has to recover them before the loader operator pushes the material into the big pile.



Urban Ore

The salvager takes the materials off the floor and loads them into Urban Ore's box truck. When full, the truck goes over the transfer station scale to get a weight slip, and the salvager and other staff unload it at the sales area's dock. Then the salvager returns to the floor.

Process (Continued)

The heart of Urban Ore's business is buying and selling discarded reusable goods. Its staff buy materials from individuals and businesses and sell these commodities to the general public. Setting prices for items bought and sold is more art than science. Urban Ore's staff learn from experience what items can sell at what prices and buy accordingly.

Urban Ore has two fulltime salvagers who park a truck at the transfer station's tipping floor and pull out salvageable items as loads are dumped.

Urban Ore uses City scales to weigh all loads its own workers recover through salvaging or the pickup service. It does not weigh everything it sells, but does inventory once a year, and develops estimates of its overall tonnage using conversion factors derived from Salvage & Recycling and Outsider Trader activities.

Salvaged items and those dropped off are priced and set out for sale in the various retail areas. Everything is well organized. For instance, the BMX has 26 categories of doors.

All of Urban Ore's divisions are profit centers for the company. They frequently sell to each other.

Urban Ore prefers to sell the materials it receives for reuse. Materials that cannot be sold are recycled locally. For example, glass and ceramic materials are taken to a local quarry and made into sand and gravel. Inventory turns over rapidly. Fast material handling is the key to its business. It sells or recycles nearly everything; less than 2% of materials received are landfilled.

Costs and Benefits

Capital costs	Very little upfront capital; self-financing
Operating costs	\$1.4 million/year (more than 50% covers wages and benefits)
Cost for incoming discards	Zero paid for items salvaged at transfer station. Price paid for items brought in varies.
Revenues	\$1.4 million/year (90% from the General Store and BMX; 10% from the other divisions)
Financing mechanisms	Profits are used to finance improvements.
Full-time equivalent (FTE) jobs	26 FTE (22 full-time employees and 6 to 8 part-time employees)
Job skills required/training	Most jobs are skilled. Some managerial training. Sales and procurement staff learn from each other. While the organizational structure is hierarchical, everyone has the capability of making decisions (such as negotiating sales and purchases).
Employment benefits/wages	\$9 to \$18 per hour, including an average of \$3 per hour in bonuses. Everyone is on hourly salary. To encourage profits and cooperation, Urban Ore augments salaries with bimonthly bonuses, which are divided equally among all employees according to their hours. The Bonus Pool is based on 9.5% of net sales volume plus \$15 for each ton diverted. Morale is high and turnover is low. After working 90 days, staff are eligible for a health plan.
Price customers pay for items	Varies according to item. Prices are not based on a formula, more on trial and error and learning what customers are willing to pay. Most sales are between 50¢ and \$500. Average sales at the General Store and AMX are smaller than those at BMX.
Community benefits	In addition to diverting salvageable items and creating good high-paying jobs, Urban Ore pays local residents and businesses a quarter of a million per year for their reusable goods and pays more than \$100,000 in sales taxes each year, which in turn supports various state, county, and local governments and assessment districts.

Tips For Replication

- Run an honest business.
- Use more labor, less capital.
- Hire a good bookkeeper and accountant.
- Stress on-the-job safety (Urban Ore provides its workers with steel-toed boots, gloves, and respirators).
- Control costs.

Replicability

Can operation be replicated	Probably; must be willing to work very hard.
Replication/expansion needs	It is looking at corporate restructuring to facilitate expansion and succession.
Available to help replicate business	Yes. Urban Ore is working with others to set up an international reuse development organization (ReDO) to provide assistance to newly emerging reuse enterprises.

Wooden Artifacts Conservation

Hugh Laing-Meason, a conservator of antique furniture, has been coordinating a nonprofit Furniture Repair Workshop through the Stone County Community Resource Council since 1989. Stone County, located in the foothills of the Ozarks, in north-central Arkansas, has a population of under 10,000. Mr. Laing-Meason and a few volunteers are saving over 600 pieces of solid-wood furniture per year from the landfill, and donating the fixed-up pieces to needy families within the county.

The program recovers only about 5 tons per year, saving the County money in avoided disposal costs. Due to soil and topography conditions, a landfill cannot be sited within the County's borders. All waste has to be hauled 70 miles and deposited in an out-of-county landfill.

The other major benefit of the program is the free furniture it provides to county residents. Furniture is usually provided one piece at a time; but a store room is kept full of enough furniture for one whole house. This furniture is available for families that may lose their homes to fire, tornados, or other disasters.

The furniture repair workshop is also an important source of training for students studying furniture restoration, and people who want to learn how to build or fix their own furniture. This training can lead to employment opportunities in Stone County as the county is a community of folk artisans and traditional manufacturers. It is home to the Ozark Folk Center and the Arkansas Folk Festival.

Hugh Laing-Meason, Conservator
Wooden Artifacts Conservation
P.O. Box 989
Mountain View, AR 72560
Phone: 501-269-3934

- **Type of operation:** nonprofit furniture repair workshop
- **Start-up date:** 1989

Materials Handled, Collection, and Marketing Information

Quantities of discards handled	600 pieces of furniture per year (an estimated 5 tons per year)
Discards repaired/reused	Nearly all pieces brought in to the workshop are repaired.
Incoming discards disposed	All waste from the shop is recycled.
Types of durable discards handled	Solid-wood furniture: chairs, kitchen tables, coffee tables
Types of other materials handled	Some other furniture, upholstered furniture in good condition
Sources of discards	Mostly county residents
Collection strategy/method	Local residents know of the workshop, county solid waste personnel can notify the workshop of available items, residents having garage sales are invited to donate furniture.
Customers/end markets	Repaired furniture is distributed to families and individuals in need through the Stone County Community Resource Council.
Service area	Stone County, Arkansas, 612 square miles
Marketing strategy	Marketing is through word of mouth. If more furniture were donated now, the resources of the workshop program would not be adequate to repair them.

Process

Equipment used	Lathe, hand tools, truck
Site/building description and size	Workshop, store rooms
Site/building leased or owned	Workshop is a private furniture workshop, space and time are donated for the repair program.
Operating schedule/shifts	Daily (about 20 hours a week)

Process (Continued)

The furniture repair workshop is donated space in Mr. Laing-Meason's furniture conservation workshop. Mr. Laing-Meason, his students, and volunteers spend a total of about 20 hours per week fixing furniture to give away. Local residents know of the program and save their broken furniture for it. Very little storage space is available, and, as of June 1996, a backlog of 12 pieces were waiting to be repaired.

Students and volunteers repair the furniture with hand tools. Salvaged hardwood limbs from the

County's tree trimming program are used to make replacement parts. All wood waste from the workshop is chipped for mulch.

Immediately after repair, furniture is distributed to local families through the Stone County Community Resource Council. One storage room exists, called the "burnout room." This room is stocked with all the furniture for one house, on-hand in case a family is displaced by a fire or other natural disaster.

Costs and Benefits

Capital costs	None
Operating costs	An estimated \$1,500 per year
Cost for incoming discards	None
Revenues	\$1,500 per year
Financing mechanisms	Donations
Full-time equivalent (FTE) jobs	0.5 FTE
Job skills required/training	One experienced furniture restorer must supervise the work. Volunteers receive training in furniture construction and repair. Most tools used are non-power, hand tools. Many repairs require lathe turning.
Employment benefits/wages	All labor is volunteered
Price recipients pay for items	Items are given to recipients for free, some may make contributions for gas, tools, etc.

Tips For Replication

- Support from a skilled furniture craftsman is essential.
- Less experienced volunteers are easier to find.

Replicability

Can operation be replicated	Yes
Replication/expansion needs	Operating funds, and more space are needed for expansion within the County.
Available to help replicate business	Yes

Enough repairable furniture exists in the county to triple the tonnage diverted from the landfill to 15 tons per year (about 1,800 pieces of repaired furniture). Another area of waste reduction Wooden Artifacts Conservation would like to explore is repairs, at low cost, for residents who want to keep their furniture.

Expansion is currently limited by lack of resources: there is no dedicated workshop for repairs, there is inadequate storage space for furniture, and the coordinator is currently

donating a few hours per week to administration of the program. To expand the program, organizers will need more donated workspace and storage space, and compensation for the longer administrative hours.

The program can be replicated in other counties, but the hardest resource to find is skilled furniture craftspeople who are willing to donate their time for training and supervision of unskilled volunteers.

Appendix A: Sample Directories & Outreach Materials

Clothing

Clothes must be in good condition to be accepted by any of the programs listed below. Use MC Textile dropoff clothes and other textiles in less than good condition—located at the transfer station.

Case of Maryland
310 Tulip Ave., Takoma Park, MD 20912
301/270-0442

Notes: Open, Noon to 6 pm, Monday through Friday

Colesville Clothing Center
14015 New Hampshire Ave., Silver Spring, MD 20904
301/394-7721

Interfaith Clothing Center
751 Twinbrook Parkway, Broom Middle School, Rockville, MD 20851
301/424-3796, 301/762-8682

Neelsville Clothing Center
Neelsville Presbyterian Church
20701 Frederick Rd., Germantown, MD 20876
301/972-3916

Notes: Open Mondays 9 am - 3 pm; Clothes can be brought in bags anytime so the shed attached to the back of the old white church. The clothes must be placed in the shed to prevent water damage.

7th Day Adventist Clothes Closet
501 Sligo Ave., Silver Spring, MD 20910
301/595-6256

Notes: Open Monday through Thursday, 9 am-4 pm

Shepherd's Table
855 Bonifant St. Silver Spring 20910
301/595-6463, after-9am
Note: All clothes accepted

Call the shelters listed below beforehand to be sure that clothing is needed. Clothes must be in good condition and are usually accepted on a seasonal basis. Local congregations such as churches and synagogues often have clothing drives and sometimes have clothing closets. Support them when you can.

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Bethesda Cares
772B Woodmont Ave., Bethesda, MD 20817
301/907-9244, 301/681-1195
Notes: Men's clothes only. Talks to office, 9:30 am - 1 pm, 2:30 pm - 5 pm weekdays. Drop-off site at Sluwell Friends Lower School, Mondays, 9:30 am - 11:30 am. Call for directions.

Bethesda Shelter for Men
4849 Cordell Ave., Bethesda, MD 20814
301/907-9597
Notes: After 5 pm any day of the week. Just men's clothing only.

Carroll House Men's Shelter
2899 Linden Ln., Silver Spring, MD 20910
301/495-4900
Notes: Call for an appointment.

Chase Partnership Shelter
600 E. Guide Dr., Rockville, MD 20850
301/424-1390

Cordella House
17 Wood Ln., Rockville, MD 20850
301/340-7157
Notes: Women's clothes only.

Crisis Center
4910 Auburn Ave., Bethesda, MD 20814
301/656-9161, -9162, -9526
Notes: Open 8 am - 4 pm, weekdays

Dorothy Day Shelter
251 N. Stonestreet Ave., Rockville, MD 20850
301/762-8314
Notes: Women's clothing only.

Greentree Shelter
6301 Greentree Rd., Bethesda, MD 20817
301/965-2190
Notes: 9 am - 5 pm; Women's and children's clothes only.

Helping Hands Shelter
Mt. Calvary Baptist Church
622 N. Horners Ln., Rockville, MD 20850
301/340-2796
Notes: After 6 pm.

Re Run (Vintage Clothing)
2956 Ennalls Ave., Wheaton, MD 20902
301/949-4472

20



A Household Guide to
Waste Prevention By Repairing,
Renting and Reusing Goods

1st Edition



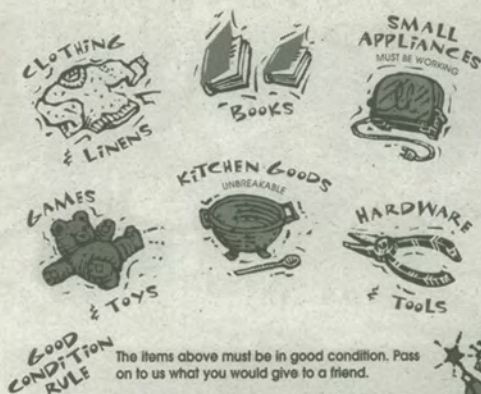
Montgomery County Government
Department of Environmental Protection

301-217-2770

Cover and sample pages from
Montgomery County, Maryland's reuse
directory.



..... SAVE FOR REUSE

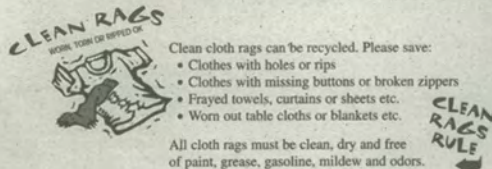


GOOD CONDITION RULE
The items above must be in good condition. Pass on to us what you would give to a friend.
Reusable household goods are donated to Goodwill/Easter Seal. They provide programs and services for people with disabilities or disadvantages.

HOUSEHOLD GOODS
✓ These are all good enough for someone else to use.
✓ This plastic bag is tightly closed.

RECEIPT
Save this for your records.
Thank you for donating one bag of reusable household items, clothing and clean cloth.
Goodwill Industries, Inc.
Easter Seal Society of MN
2543 Como Avenue
Saint Paul, MN 55108
Date _____

..... SAVE FOR RECYCLING



Clean cloth rags can be recycled. Please save:
• Clothes with holes or rips
• Clothes with missing buttons or broken zippers
• Frayed towels, curtains or sheets etc.
• Worn out table cloths or blankets etc.
All cloth rags must be clean, dry and free of paint, grease, gasoline, mildew and odors.

CLEAN RAGS
✓ All this scrap cloth is clean.
✓ This plastic bag is tightly closed.

..... WHAT TO DO



1 FILL UP BAG
Please fill up your own 30-gallon plastic bag. Close the top tightly. Anything that gets wet or falls out in the truck is no longer usable.

2 PUT ON TAG
Please clearly mark your bags in some way. You can use the paper tags above by taping them on. You can write on your bags with a marker. You can use the stickers provided by the pickup driver. If you need a receipt, use the one above or call the recycling office at 644-SORT (7678).

3 SET OUT
Put your bag by your blue recycling bin on your recycling day before 7:00 a.m. A new tag will be left in your bin each time a full bag is collected.

Saint Paul Neighborhood Energy Consortium

For recycling information call 644-SORT (7678)
For the hearing impaired 649-3005

Cover and inside of 8.5" by 14" folded brochure used to publicize St. Paul's curbside collection program for textiles and household goods.



RECYCLING IS

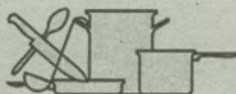
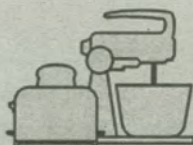
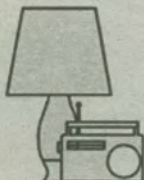
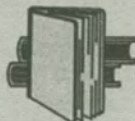


NOW EASIER THAN EVER!

The Salvation Army, in cooperation with the City of Los Angeles, makes recycling of old clothes, small working appliances and other usable household items more convenient for you.

On your regular trash collection day, a Salvation Army truck will come by and pick up the following repairable and reusable items:

- * Toys
- * Books
- * Blankets, linen
- * Bric-a-brac
- * Clothes, accessories, shoes, other wearing apparel
- * Small appliances (toasters, blenders, kitchen utensils, etc.)
- * Decorative and other repairable household items



Place the above items in your Salvation Army 30-gallon plastic bag and set it out next to your yellow recycling bin on your regular trash collection day for pickup by a Salvation Army truck.



Bulkier items such as furniture, TVs, stoves, refrigerators, etc., can be picked up by appointment only. For more information, call The Salvation Army at 1 (800) 464-3439.

When you recycle with The Salvation Army, you help divert recyclable items from the landfill, while you help this organization subsidize its many shelter programs for the needy.

Yellow 8.5" by 11" flier distributed by the City of Los Angeles to residents in its pilot program for textiles and reusable household goods. One side was printed in English, the other in Spanish.

Brochure advertising World Wide Web information on secondhand goods.



Introducing the
Internet Resale Directory
on the World Wide Web.

Featuring
secondhand,
consignment,
flea markets,
thrift shops,
collectibles and
surplus businesses
across the country.


Visit our web site at:
www.secondhand.com



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(707) 939-9579 Fax
e-mail: rtnc@sonic.net

Montgomery County, Maryland flier publicizing its furniture reuse program.

Furniture Reuse




Montgomery County Department of Environmental Protection sponsors a furniture pick up program with Housing Opportunities Commission (HOC). HOC will pick up any reusable furniture item provided it is in good condition.

What Is Acceptable:
Acceptable items include:

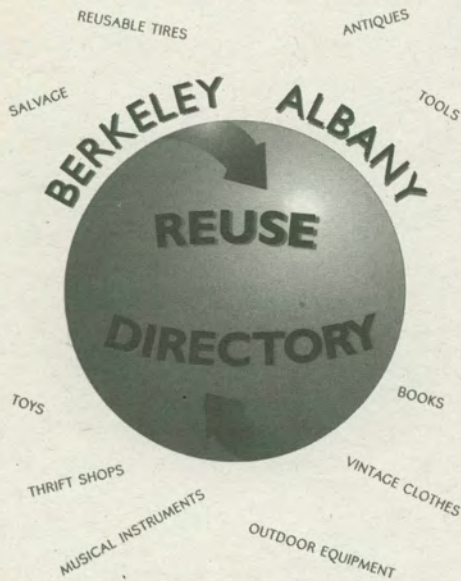
- Tables
- Chairs
- Sofas
- Beds
- Mattresses
- Box Springs

What Is Not Acceptable:
No appliances of any type are accepted.

To arrange for a pick up, please call (301) 495-0983.

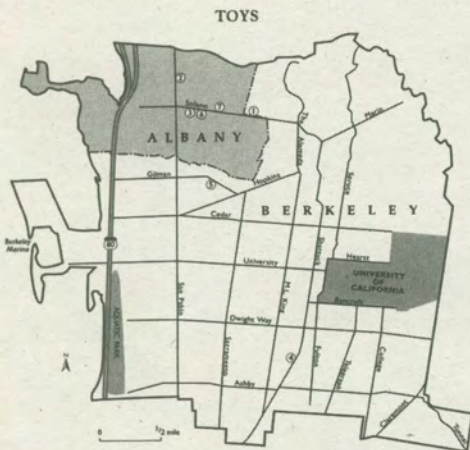


Appendix A: Sample Directory and Outreach Materials



Cover and sample pages from the Berkeley-Albany reuse directory in California.

Where to buy, sell, rent, repair, and donate reusable consumer products in Berkeley and Albany



TOY EXCHANGE
1224 Solano Ave.
Albany, CA 94706
527-3737

Mon-Sat 11am-6pm
Buy, sell & trade video games, action figures, toys, comics & collectibles.



TOY GO ROUND
1361 Solano Ave.
Albany, CA 94706
527-1363

Mon-Sat 10am-5pm;
Sun 12-5pm
All consignment. Toys, children's equipment, books, & clothes.

Toys

Play reuse ball!

To find used toys of every sort, the place to start is Solano Avenue, working all the way down to and around San Pablo Avenue in Albany. Repair your favorite bear & dress your doll for fall at these favorite shops. Toys are very resellable & collectible!

BEARS AND BAUBLES ①
1603 Solano Ave.
Berkeley, CA 94707
524-4794

Tues, Wed, Sat 10am-5:30pm;
Thur-Fri 10am-7pm
Collectible plush bears & accessories.

SCOOBY'S TOYS AND COLLECTIBLES ④
2750 Adeline St.
Berkeley, CA 94703
548-5349

By appointment only.
Vintage collectible toys.

BRASS HORSE, THE ②
615 San Pablo Ave.
Albany, CA 94706
526-7522

Wed-Sat 11am-5:30pm or by appointment.
Repair, buy & sell mostly dolls & doll clothes.

TIDDLYWINKS ⑤
1302 Gilman St.
Berkeley, CA 94706
527-5025

Mon-Thur, Sat 10am-5:30pm; Fri 10am-6pm;
Sun 12-5pm
Toys, books & baby equipment, plus infant to pre-teen clothing. Buys by appointment. (Donate unsold items to Alameda Co. Health & Human Services WIC Program, Chrysalis Program; & Bare Essentials for Babies.)

PLAY IT AGAIN TOYS ③
1170 Solano Ave.
Albany, 94706
528-8697

Tues-Sat 10am-5:30pm
Consignment. Toys & baby equipment; childhood treasures.

Starting a
**MATERIALS
DONATION
PROGRAM**

NEW YORK CITY
DEPARTMENT OF CULTURAL AFFAIRS
DEPARTMENT OF SANITATION

a step-by-step
guide



Cover page to Materials for the Arts (New York City) guide to starting a donations program. This 56-page guide includes sample contracts, letters, and press releases.

Appendix A: Sample Directory and Outreach Materials

**Reuse It,
Repair It,
Rent It,
Donate It —**

**But Don't
Throw It Away!**

The Department of Sanitation
Guide to Reuse in New York City



Cover and select pages from the *New York City Department of Sanitation's 12-page guide on reuse*. The guide includes a list of *NYNEX Yellow Pages* subject readings to facilitate searches of repair and rental shops as well as lists of the organizations that accept and distribute donated used goods.

Repair It!

Instead of replacing it, why not try to fix it? There are businesses throughout the City that can fix just about anything. Broken furniture, appliances, clothing, and tools may only need a repair or adjustment to be usable again. And usually repairing is less expensive than a replacement, so you might even save some money, too.

Some Repair Tips

- Regular cleaning and proper maintenance will give a product a longer life with less need for repair.
- Regularly check and repair seasonal items such as gardening tools, air conditioners, and motorized equipment.
- Purchase items with good warranties and understand which repairs are covered.

Following is a list of *Yellow Pages*¹ subject headings to help you in your search for repair shops.

Did you know?

Furniture and furnishings account for 7.4 million tons of the United States waste stream.



Mention in this guide does not constitute an endorsement by the NYC Department of Sanitation.

¹ These *Yellow Pages* subject headings appear in all editions of the *NYNEX Yellow Pages*.

Air Conditioning Contractors and Systems [repair]
Appliances-Household-Small-Service and Repair
Appliances-Household-Major-Service and Repair
Bathrooms and Sinks-Repairing and Refinishing
Bicycle-Dealers, Repairers and Rental
Boilers-Repairing & Cleaning
Carpet and Rug Cleaners
Carpet and Rug Repairing
Charities-see Social and Human Services
China and Glassware-Repairing
Cigar and Cigarette Lighters-Repairing
Cleaners [for clothing]
Clocks-Service and Repair
Computers-Service and Repair
Dishwashing Machines-Service and Repair
Dolls-Repairing
Drapery and Curtain Cleaners
Electric Equipment-Service and Repairing
Engines-Rebuilding and Exchanging
Eyeglasses-see Optical Goods
Fix-It Shops
Floor Machines-Repairing
Furniture Cleaning
Furniture Repairing and Refinishing
Handbags-Repairing
Hats-Cleaners and Renovators
Jewelry-Repairing
Landscape Contractors
Leather Goods-Repairing
Luggage-Repairing
Microwave Ovens-Service and Repair
Musical Instruments-Repairing
Nackies-Renovating
Office Furniture and Equipment-Repairing and Refinishing
Optical Goods-Service and Repair
Photographic Equipment-Repairing
Pianos-Tuning, Repairing and Refinishing
Picture Frames-Restoring and Repairing
Pillows-Renovating
Porcelain Enamel Repairing and Refinishing
Quilts-Renovating
Rackets-Restringing and Repairing
Ranges and Ovens-Service and Repair
Refrigerators and Freezers-Dealers and Service
Sates and Vaults-Opening and Repairing
Saws-Sharpening and Repairing
Sewing Machines-Service and Repair
Sharpening Service
Shirts-Repairing
Shoe Dyers
Shoe Repairing
Silverware Cleaning, Repairing and Replating
Skate Sharpening
Slip Covers-Ready & Custom Made
Social and Human Services [list of charities]
Solar Energy Equipment and Systems-Service and Repair
Speakers-Rebuilding and Repairing
Sporting Goods-Repairing
Stairs-Resurfacing
Stereophonic & High Fidelity Equipment-Service and Repair
Tallors
Tape Recorders & Players-Sound-Service and Repair
Telephone Equipment and Systems-Service and Repair
Television and Radio-Service and Repair
Tire Retreading and Repairing
Tools-Repairing and Parts
Toys-Repairing
Tree Service
Typewriters [for repair and rental]
Umbrellas-Repairing
Upholsterers
Vacuum Cleaners-Service and Repair
Venetian Blinds-Repair and Cleaning
Video Games-Service and Repair
Video Recorders & Players-Service and Repair
Vinyl Repair Service
Washing Machines and Dryers-Service and Repair
Watches-Service and Repair
Water Heaters-Repairing
Weather Stripping Contractors [energy efficient]
Wheel Chairs [rental and repair]
Window Shades-Cleaning and Repairing
Windows-Repairing

Repair It!

This document is one in a series of manuals prepared to facilitate economic development through recycling and reuse of materials. The manuals listed below are available from the Institute for Local Self-Reliance's National Office.

Sustaining Businesses & Jobs through Pallet Reuse & Repair

\$15.00 plus S&H

Plug into Electronics Reuse

\$15.00 plus S&H

Weaving Textile Reuse into Waste Reduction

\$15.00 plus S&H

Recycling and Economic Development through Scrap-Based Manufacturing

\$20.00 plus S&H

Creating Local Recycling Markets

\$6.00 plus S&H

Manufacturing from Recyclables: 24 Case Studies of Successful Enterprises

(U.S. Environmental Protection Agency), free with the purchase of \$25.00 or more, plus S&H

Reuse Operations: Community Development through Redistribution of Used Goods

\$12.00 plus S&H

Community Development Corporations and Reuse Operations: Four Case Studies of Working Relationships

\$8.00 plus S&H

Expanding Scrap-Based Manufacturing through the Community Joint-Venture Process

\$6.00 plus S&H

Preparing a Business Plan for a Small-Scale Recycling-Related Venture

\$6.00 plus S&H

Financing Recycling-Related Ventures: Options for Community Development

\$12.00 plus S&H

Recycling Means Business in Baltimore, D.C., and Richmond

\$12.00 plus S&H

States Close the Loop: A Survey of Recycled Content Laws and Other Market Development Strategies

\$10.00 plus S&H

Shipping and handling charges:

Domestic Orders: Add \$3.75 for one book, \$0.75 for each additional book;
Canadian Orders: Add \$5.00 for one book, \$3.00 for each additional book;
Foreign Orders: Add \$10.00 for one book, \$5.00 for each additional book.

DC residents please add 5.75% sales tax.

To order please contact:

INSTITUTE FOR LOCAL SELF-RELIANCE
2425 18th Street, NW, Washington, DC 20009-2096
Phone: 202-232-4108; Fax: 202-332-0463
Email: ilsr@igc.apc.org
Website: www.ilsr.org or grn.com/grn/org/ilsr.htm

Prepayment required. All payments by check or money order only. Foreign checks must be drawn on a U.S. bank with U.S. routing numbers. We also accept Canadian postal or international money orders. Discounts available for bulk orders; contact the ILSR office. Please allow four to six weeks for delivery.