

Weaving Textile Reuse into Waste Reduction



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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

Textile recycling—the use and reclamation of products made from textile fibers—is an old and well-established industry. More than 500 textile recycling companies in the United States divert textile products from the waste stream and employ tens of thousands of workers in the process. In 1994, these operations recovered 770,000 tons from the municipal solid waste stream.¹ About 48% is reclaimed as secondhand clothing. Another 20% becomes wiping and polishing cloths, and the remaining 26% is converted into fiber to be used in new textile products.² Despite record demand for textiles, the industry has been downsizing as a result of insufficient supply. Meanwhile an estimated 6.56 million tons of textiles are generated each year, up from just 1.7 million in 1960.³ Increasing municipal textile recycling will divert additional waste from landfills and incinerators, and enable textile recycling companies to expand their operations, sustain more jobs, and clothe more of the world's peoples.

This report profiles the operating experiences of ten programs that divert household textiles from municipal solid waste disposal. Six are county operated, three are city run, and one represents a private effort. All of these programs began in the last 6 years. (See Table 1 for a list of communities profiled. These programs by no means represent all those operating.) We also present information on 22 textile recycling companies who responded to

our survey soliciting information on their businesses and interest in household textiles. (See Appendix B.)

Local thrift stores, charities, churches, and consignment stores are the backbone of clothing recovery and distribution. Most household textiles recovered flow first through these organizations, who sell or give away what they can. They find ways to unload what's left—often to “rag sorters” or “textile materials recovery facilities” (MRFs), but also often to the dump.⁴ Many people don't bother to take their unwanted clothing to local outlets—it's just too inconvenient for them. Results of a survey conducted by Goodwill Industries in St. Paul, Minnesota 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. Many textiles are ending up in the landfill.

One beauty of textile reuse and recycling is the symbiotic relationship possible among charities, government recycling agencies, traditional rag graders, and nonprofit community-based service providers. Charities cannot use all the clothing donated to them. Donated clothing can be out-of-season or in poor condition, or volumes may be just too great for them to handle. Thrift Stores too do not sell all the used clothing they receive. Textile recycling

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*
- *Creating Wealth from Everyday Items*
- *Plug into Electronics Reuse*

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.

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

2. “Don't Overlook Textiles!” Council for Textile Recycling, Bethesda, Maryland, undated.

3. *Characterization of Municipal Solid Waste in The United States: 1995 Update*.

4. A rag sorter or textile MRF is a company that grades postconsumer textile waste by product, condition, or material content. At this stage, textile waste is converted from scrap to raw material.

Postconsumer Textiles Recovered

- clothing
- drapes/curtains
- towels
- sheets and blankets
- clean rags and sewing remnants
- table cloths
- belts
- handbags
- paired shoes and socks

Preconsumer Textiles Recovered

- cuttings—small scraps of fabric knits or wovens, generally a by-product of the apparel manufacturing process
- mill ends—pieces of textiles of various lengths, most often ranging from 1/4 yard to full rolls, originally from mills and manufacturers.
- goods damaged during production
- remnants—short lengths of textiles that are full width or “selvage to selvage” (similar to mill ends)

Source: *Buyers Guide and Directory, 1995*, Council for Textile Recycling, Bethesda, MD.

Table 1: Select Communities with Past or Present Textile Recovery Programs

Community	Population/ Type of Community	Type of Program	Tons Per Year Collected	Start-up Date	Sources of Textiles
Calvert Co., MD	63,000/Rural	drop-off and weekly curbside for charities	93	February 1995	Residents and charities
Carroll Co., IA	21,430/Rural	weekly curbside	60	November 1990	Residents in 6 counties
Chatham Co., NC	42,000/Rural	drop-off	NA	April 1993	Residents
City of LA (West Valley), CA	10,700/Urban	pilot weekly curbside	40 (a)	October 1994	West Valley residents
Cobb Co., GA	509,400/Rural	drop-off/2-day pilot curbside	9 (b)	January 1996	Residents
Montgomery Co., MD	750,000/Suburban	drop-off and weekly curbside for charities	156	March 1993	Residents and charities
New Threads, Phila., PA	NA/Urban	drop-off, scheduled pickups	~100	September 1995	Residents
San Jose, CA	840,000/Urban	weekly curbside	150	July 1993	Residents
Somerset Co., NJ	265,000/Rural/Suburban	biweekly curbside	170	July 1992	Residents
St. Paul, MN	272,000/Urban	biweekly curbside	168	July 1992	Residents

Source: Institute for Local Self-Reliance, 1996

NA = Not Available

(a) Includes reusable household items also collected.

(b) Collected January 1996 to May 1996 through drop-off at transfer station and recycling center and through 2 days of curbside pickup in one city.

(c) New Threads, Inc., is a nonprofit textile reuse enterprise offering curbside service in select Philadelphia neighborhoods.

Some Other Communities with Textile Recovery Programs (not profiled in this report)

- Aberdeen, MD
- Albany, NY
- Bethlehem, NY
- Carol County, Ohio
- Eastern Rensselaer County, NY
- Elmira, NY
- Norfolk-Haldiman, Ontario, Canada
- Washington County, NY

companies or MRFs, however, can and do recycle these textiles.

The scope and breadth of the programs profiled here are wide. There is no one model. Communities looking at starting a textile recovery program should explore options that best suit their local situation, recycling/reuse infrastructure, needs, and markets.

Carroll County, Iowa; St. Paul, Minnesota; San Jose, California; and Somerset County, New Jersey, collect textiles at curbside along with traditionally targeted recyclables every week or every other week. Aberdeen, Maryland, collects textiles at curbside once a year in the spring. New Threads, Inc., picks up textiles every two to three months in select Philadelphia neighborhoods. Calvert and Montgomery Counties, Maryland, and Cobb County, Georgia, have added textiles to a long list of materials acceptable at drop-off sites. Some of the better programs have partnered with, or otherwise involve, local charities and nonprofit organizations. Goodwill Industries handles all the textiles collected in St. Paul. This program also collects reusable household items at curbside. The Salvation Army, in a joint effort with the City of Los Angeles, operated a 1-year pilot in select neighborhoods. Like St. Paul's, this program targeted reusable household goods in addition to clothing.

Most communities listed in Table 1 ask residents to place textiles in plastic bags. Keeping textiles clean and free of mildew is

essential. Carroll County, Iowa, however, allows residents to commingle textiles with their mixed paper and place these in paper or plastic sacks at the curb. In Chatham County, County staff hang up untorn clean clothes for give-away at regional "swap shops."

The types of textiles accepted in programs varies too. Many programs will take paired shoes, belts, hats, and other clothing accessories, but some only want clothing. Calvert County, Maryland, accepts fabric pieces no smaller than 15 inches by 15 inches. St. Paul, Minnesota, will accept clean rags as small as 5 inches by 5 inches.

One common thread running through these programs is the stable and relatively high price end users are paying for collected textiles—\$80 to \$160 per ton. Textiles are valuable. With few exceptions, revenues are covering communities' textile collection and processing costs. Capital investment in starting textile reuse and recycling is zero or negligible. Communities are using existing equipment such as trucks, sheds, or sorting conveyors—equipment already dedicated to recycling operations.

On the downside, actual tonnage of textiles collected has often been much less than initially expected. Somerset County, New Jersey, for instance, figured that textiles comprised 10,000 tons per year of its 200,000 ton-per-year municipal solid waste stream. It initially expected to recover about half of this. However, instead of 5,000 tons per year, the

Introduction

program is recovering under 200 tons per year. Comprehensive education and partnering with charities may help increase tonnage collected through municipal and county programs. Residents may not participate in public sector programs if they believe they're diverting materials from local charities. They don't realize that city- and county-run programs can complement the clothing reuse efforts of local charities.

One tip for replication echoed by most of the communities is educate, educate, educate. (See profiles for more replication tips.) Good publicity and outreach will help increase participation, the quality of textiles collected, and tonnage. (Appendix A contains sample publicity tools used in select communities.)

Calvert County, Maryland, probably has the highest ton-to-population-served ratio. By offering weekly curbside collection to local charities and adding textiles to its drop-off sites, the County does a good job at diverting textiles from the landfill. Previous to implementation of this program, Calvert County charities were landfilling significant amounts of clothing they could not use.

Textile recovery programs are working and can easily be replicated throughout the country. Rural, suburban, and urban communities in the south, northeast, mid-west, and on the west coast have paved the way for others to follow.



Dumont Export Corporation

Workers sorting textiles by grade at Dumont's Philadelphia facility

Textile Recycling Facts

- 500 textile recycling companies in the U.S. divert 1.25 million tons of postconsumer textile waste each year from landfills and incinerators
- Most of these businesses are small, family-owned, with fewer than 500 employees, the majority have 35 to 50 workers.

Source: Institute for Local Self-Reliance and Council for Textile Recycling

- Textile recycling companies contribute to the local tax-base; they generate \$700 million dollars in gross revenues each year.
- Industry members recover about 93% of the textiles they handle.
- On a per-ton basis, textile recycling companies sustain 37 times more jobs than landfills and incinerators.



ILSR, 1996

Workers sorting textiles into various grades at Sunrise Trading Corporation's Jersey City facility.