

Ribbon Recyclers
[Redacted] Inc.

Office: 3773 Cherry Creek Dr N. #500
Denver, CO 80209 USA
(303) 377-4695 (800) 477-3465 Fax # (303) 337-2472

Ship Ribbons to Plant: 15509 E ILIFF Ave.
Aurora, CO 80013-1035 USA

RE: GSA Federal Government Award #: New Item Intro. Sched. GS-14F-9716C

USA - GSA

Greetings:

Thank you for your interest in our recycling services. Our company sells recycled ribbons, laser toners, ink jet cartridges and plain paper fax cartridges. Recently our company received the referenced award to supply you with recycled cartridges.

Governments along with industry are encouraging people to cut landfill waste by up to 50% through recycling. Americans use 300 million ribbons every year & 99% (600,000 toxic tons) are dumped into landfills. We know ribbon recycling is not a big step but it is an easy step. The leading edge benefits are a rare combination:

- **Saving our customers money** (Up to 60% of the cost of a new OEM ribbon),
- **Reducing toxic waste** (Up to 90% reduction in toxic ribbon waste) and
- **Creating new jobs for the disabled** (Goodwill Industries is performing the operations and distribution).

Several notable customers are using our services, including CW Electronics, 1st Interstate Bank, City of Phoenix, State of Colorado (the Colorado State award includes all political subdivisions - cities, counties, hospitals, school districts, special districts, etc.) and the United States Federal Government (GSA).

Your biggest challenge will probably be changing behavior - getting people to toss old ribbons into a "Used Ribbon" box rather than in the trash. We can help. We offer "Used Ribbon" signs for your business's collection boxes and "Stop Tossing your Ribbons" posters for bulletin boards. Just give us a call if you need the signs or posters. Also, in addition to ribbons we also supply laser, ink jet & bubble jet cartridges with the same type of savings.

The next time you need ribbons, ink jet & bubble jet cartridges please remember us.

Regards,


Errol Rowland

P.S. Below is a "Return Cartridge" shipping label for your convenience. To send your cartridges, just copy this page, cut out the label, list the printer type & send us the cartridges.

(Cartridge Recycling Return Label)

USA - GSA

-- Printer Type(s): _____

Ribbon Recyclers
[Redacted] Inc.

To: [Redacted] Inc. - (303) 377-4695
15509 E ILIFF Ave. C/O Goodwill Industries
Aurora, CO 80013-1035 USA

Marie B. Zanowick
Waste Watchers Pollution Prevention Bulletin
EPA Region VIII
999 18th Street Suite 500
Denver, Colorado 80202-2405
(303) 294-1085



Waste Watchers

A Pollution Prevention Bulletin

P2 SPAWNS A NEW INDUSTRY: RIBBON RECYCLING



The U.S. has a billion dollar ink ribbon market and nearly all ink ribbons are tossed into landfills for ultimate disposal. That's 600,000 tons of toxic waste per year.

But that number is about to change thanks to a new industry of ribbon recyclers, including Error Rowland of Ribbon Recyclers, Inc. in Denver, Colorado

Impact and dot matrix printing ribbons are found nearly everywhere, including computers in industry, in the hard copy receipt accompanying every retail purchase, and in bank automatic teller machines (ATM) receipts. Even though nonimpact printers are used for most finished product printing, the number of printers requiring ribbons continues to grow, Rowland said.

How are Ribbons Recycled?

Ribbon recycling is more environmentally friendly than most recycling processes because the ribbons are reused rather than remanufactured into a new product. There are two current methods of ribbon recycling: re-inking and reloading.

Re-inking applies new ink to existing fabric. New electromagnetic machinery used with improved inks provides uniform ink distribution to the fabric. Reloading is replacing fabric in the cartridge or spool. This method is used most frequently. The plastic cartridge, gears, and spool are reused, but the fabric -- the part with the most toxins -- is still thrown away. To be even more cost-effective, ribbons should be re-inked until the fabric needs to

be replaced.

Can My Ribbons be Recycled?

Only fabric ribbons can be recycled. When you buy a new cartridge and inspect the ribbon, make sure it is fabric and not plastic. Ribbons best suited for ribbon recycling are those from the original equipment manufacturer (OEM), such as Apple, Brother, DEC, Epson, Hewlett Packard, IBM, Okidata, Panasonic, and so on. Generic ribbons cannot be re-inked or reloaded as often as the OEM because of quality issues, according to Rowland.

How Many Times Can a Ribbon Be Recycled?

The frequency of ribbon recycling depends on the type of ribbon. One ribbon can be re-inked 10 to 40 times. A ribbon used just 10 times means nine were not thrown away -- a 90 percent reduction in ribbon waste. Here are five methods to prolong ribbon life:

- Use an OEM ribbon because it is normally made of better quality materials.
- Remove the ribbon when it first starts to fade because a printer ribbon is like a sponge. A dry ribbon may fall apart.
- Do not move the print head position toward the platen as the print starts to fade. Ink provides necessary lubricants to the print head
- Store ribbons upside down. Gravity pulls ink down into the ribbon. Then, when you mount the ribbon on the printer, gravity again will distribute the ink. This will keep the ribbon fresh.
- Select a reputable ribbon recycling firm.

Ribbon Recycling (Continued)

What is the Ribbon Recycling Potential?

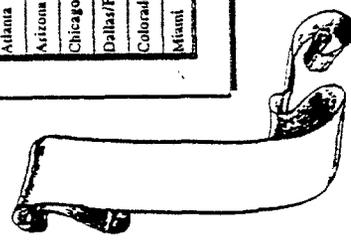
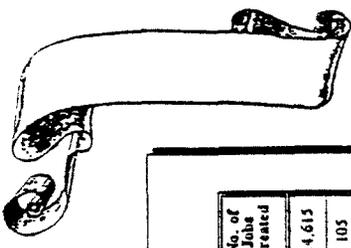
Today, about 30 percent of laser cartridges are recycled. Some organizations require recycled cartridges in their operations. The accompanying table illustrates the potential if ink ribbon recycling can achieve the same 30 percent level as laser cartridges:

U.S. Printer Ribbon Recycling
at 30 Percent

Market Area	Recycled Ribbon Market (in thousands)	Savings (in thousands)	Waste Reduction (in tons)	No. of Jobs Created
USA	\$570,000	\$285,000	371,368	14,615
Atlanta	4,097	2,048	4,108	105
Arizona	5,985	2,993	6,001	153
Chicago	18,334	9,167	6,128	470
Dallas/Fort Worth	6,014	3,007	6,030	154
Colorado	7,410	3,705	7,430	190
Miami	6,691	3,346	6,709	172

Notes:

- Market area** - Specific market area.
 - Recycled Ribbon Market** - Thirty percent of the dollar amount spent for ribbons each year in this market area.
 - Savings** - Savings assumes 30 percent market usage and selling recycled ribbon back to the original user for 50 percent of the price of a new ribbon.
 - Waste Reduction** - This assumes each ribbon is recycled just three times. Some ribbons can be recycled up to 40 times.
 - Jobs Created** - New jobs in administration, marketing, distribution, operations, and customer service.
- For more information, contact Error Rowland at (800) 477-3465 or (303) 371-4695.



Continued from page 1

Aggregate using recycled concrete saved the Solid Waste Division over \$8,000 by using over 2,500 yards of this substance in place of virgin aggregate in the same two projects mentioned above.

Asphalt made from recovered material was evaluated by the Roads Division, which used approximately 1,200 tons on an interior road project. They found that it performed satisfactorily and provided a cost-saving alternative to new asphalt.

Compost is being evaluated by the Engineering Services Section of the Roads Division in pilot applications that include compost in soil amendment applications.

Ground Wood Waste is being experimented with in a landscape-bark substitute made from shredded wood waste. This material can be viewed on the North landscape bed in front of King County Jail.

Paint made by reprocessing household and industrial waste paint represents a significant opportunity for the reduction of hazardous waste and hazardous waste disposal costs.

Plastic Products are being purchased by the Parks Division in the form of plastic lumber for bench-slat replacement, bollards and utility applications in swimming pool facilities. The best uses of this product have been as a substitute for chemically-treated lumber in contact with soil and water and other corrosive environments. Plastic lumber picnic tables, benches and landscape timbers have been in place in several parks since 1993. As well, Stadium Administration has installed over 200 units of recycled plastic lumber to replace wooden channel boards securing the Kingdome artificial turf. The performance of this material has proven superior to that of virgin lumber, and the application of this material has generated interest from stadia around the country. The Stadium has also purchased recycled plastic for fence slats, restroom partitions, worm bins, signage and skid pads for the feet of portable bleachers, all with good results. In addition, bollards made of recycled plastic are being evaluated by the Parks Division, who spent nearly \$5,000 on the bollards in 1994-95.

Rubber Chips made of processed waste tire material are used by the Parks Division as play area cover. In 1994-95, they purchased 40,000 pounds of chips for use at Southern Height's Park. They also purchased recycled rubber mats to use as backstop padding in ball parks.

The Recycled Product Procurement Program provides agencies with recycled product information through a network of people who act as liaisons between the program and the agencies. This ensures that evaluation results and specifications developed by users are shared between agencies and made available to suburban cities and other jurisdictions.

During 1994-95, the program hosted informational meetings, tours and other educational events to bring awareness of recycled product procurement opportunities to agencies.

King County is now providing recycled-product procurement information through a new service provided on the Internet called World-Wide-Web at <http://www.metrokc.gov>. For those who do not have access to the World-Wide-Web, some parts of this information is available in printed form from the Recycled Product Procurement Program on request.

Please contact Eric Nelson or Karen Hamilton at (206) 296-4210 for copies of any of these reports.

Fourth Edition Of Buy Recycled Training Manual Available

The Northeast Maryland Waste Disposal Authority, a regional solid waste management organization, has released the fourth edition of its popular "Buy Recycled Training Manual." More than 5,000 copies of the manual are currently in use. The manual is a comprehensive, instructional guide designed to teach public and private buyers and using agencies how to set up programs to buy recycled products.

Robin Depot, Executive Director of the Authority, said that the manual continues to grow in size and popularity. "The fourth edition is 10 pages longer than the previous edition and contains information about EPA guidelines for recycled products. It also includes new listings of organizations that provide information on recycled products. We also receive daily requests for the publication, which is used as a stand-alone how-to manual and as training seminars material," said Depot.

The 96-page manual includes information on the importance of buying recycled products; making a commitment to buy recycled; legislation and content standards (including information on President Clinton's Executive Order); writing specifications; testing products; purchasing options such as cooperative purchasing, closed loop recycling and indirect purchases; waste reduction, and record keeping and evaluation. The appendices list manufacturers and vendors of recycled products and provide information on recycled product organizations and standards.

In addition to the manual, the Authority provides training for public and private sector organizations on buying recycled products. The training includes the information described above and can be designed for individual organizations. To date, the Authority has conducted over 50 training programs in Maryland and the U.S.

The cost per manual is \$20 for businesses and \$15 for government agencies and non-profit organizations (including shipping). Copies are available from the Northeast Maryland Waste Disposal Authority, 25 S Charles St, Ste 2105, Baltimore, Maryland 21201-3330. Orders can be placed by telephone at (410) 333-2730 or by fax at 410/333-2721.

For more information on the manual or the training program, contact Richard Keller of the Authority at (410) 333-2730.

3

Richard Keller Named National Coalition Recycler Of The Year

Richard Keller, Recycling Projects Manager for the Authority, has been named 1995's Recycler of the Year by the National Recycling Coalition (NRC). He was presented with the award at the NRC's 14th Annual Congress and Exhibition in Kansas City in September. This is the third "Recycler of the Year" award for Richard, who also received the honor from the Maryland Recyclers Coalition in 1993 and the National Office Paper Recycling Project earlier this year.

"We are proud of Richard's accomplishments and are gratified that the Authority's training program is receiving national attention," said Robin D. Depot, Executive Director of the Authority. "We believe that buying recycled products is a key factor in the success of any waste management program and want as many organizations as possible to feel competent with the process."

Richard was selected for the award because of his work in developing the Authority's successful Buy Recycled Training Program (please refer to above article entitled "Fourth Edition Of Buy Recycled Training Manual Available"). The program is designed to teach buyers and using agencies in Maryland and throughout the country how to buy recycled products. He has conducted over 50 seminars since 1993. Richard is also the principal author of the Authority's Buy Recycled Training Manual. More than 5,000 copies are currently in use. In addition, he was recently selected as the Director of Training for the US Conference of Mayors' Buy Recycled Training Institute.

Because of the Authority's Buy Recycled Program, all of the participating subdivisions (Baltimore City and Anne Arundel, Baltimore, Harford and Montgomery Counties) have buy recycled laws of policies. Purchases of recycled products by the subdivisions exceed \$5 million per year.

For more information, call (410) 333-2730.

Laser-Tone International Tops In Recycling

Laser-Tone International (a remanufacturer of toner cartridges since 1989) has had its Hewlett-Packard LaserJet II and III cartridges tested at the buyers' laboratory, and the test results show the remanufactured cartridges out-perform the new cartridges based on density, consistency and longevity.

In addition to this announcement, Laser-Tone International recently surpassed 26,000 lbs of plastic being recycled and has recently introduced four new cartridges for recycling. They are the following: HP LaserJet 4L, HP LaserJet 5, HP LaserJet 4V and IBM 4037.

Anyone interested in more information concerning these products or in recycling of these products, please contact William F. Brock, Jr. at (800) EARTH-58.

Compost Bin Sale Sets Records

Some 1,300 San Francisco residents lined up in the sunset on September 16 to buy one of a limited number of compost bins being offered to city residents at a reduced rate by the San Francisco Recycling Program. The bin sale, the third conducted by the program, moved one-third more bins than last year, when all 960 bins were sold in less than four hours.

"The interest and enthusiasm in composting shown by San Francisco residents is encouraging", said Jack Macy, Organics Recycling Coordinator for the San Francisco Recycling Program. "More than one-third of the 1.3 billion pounds of waste taken to the Altamont landfill each year is organic material. Much of this material could easily be composted," he added.

In order to facilitate composting, the city, in cooperation with the San Francisco League of Urban Gardeners (SLUG), offered the Earth Machine, a state-of-the-art compost bin, to residents at a 70% discount at the one-day event. This bin is ideal for composting fruit, vegetable and yard trimmings.

A limited number of bins are still available from SLUG. More than 5,000 city residents have purchased bins from the program since 1990 and more than 3,000 have attended composting workshops. Free workshops on composting are offered several times a month by SLUG.

For information on free workshops or how to purchase a bin, call (415) 285-7585.

For more information, contact David Assmann of the San Francisco Recycling Program at (415) 554-3409 or Carl Grimm of the San Francisco League of Urban Gardeners at (415) 285-7584.

Public Sector Fleet Retread Tire Programs New Video From The Tire Retread Information Bureau

Public Sector Fleet Retread Tire Programs, a new nine-minute video featuring interviews with officials from cities, counties, school and municipal bus fleets, the U.S. Marine Corps and the U.S. Postal Service, is now available from the Tire Retread Information Bureau (TRIB).

This video highlights the positive experiences these agencies have had with retreaded tires and can be a valuable aid for those public sector fleets who are considering starting a retread tire program for their fleets.

Government agencies and members of the Tire Retread Information Bureau may obtain copies of the Public Sector Fleet Retread Tire Programs video at no cost by contacting the Tire Retread Information Bureau, 900 Weldon Grove, Pacific Grove, CA 93950.

Others may obtain copies at \$15 per video.

For more information, contact Harvey Brodsky at (408) 372-1917.

4

Mohawk Options—High Performance Environmental Paper From Mohawk

Mohawk Paper Mills has announced an exciting new development in environmentally-friendly papers. Mohawk Options is a multi-purpose text and cover paper created for the needs of today's designers. Designed to work in both digital and conventional printing equipment, Mohawk Options is also environmentally correct. It features plain and decorative whites, eight soft contemporary colors and both vellum and smooth finishes throughout the line. In addition, the whites are treated with the proprietary new Inxwell process, which gives greater ink holdout, a stiffer sheet and noticeably higher opacity.

There are several distinct environmental advantages to Mohawk Options including these:

- *All the whites and colors contain a minimum 20% post-consumer waste except for Warm White TCF.
- *White Sand and Desert Sand contain 100% post-consumer waste.
- *Warm White TCF is a premium quality, virgin, totally chlorine-free paper.
- *Because of the higher stiffness and opacity that derive from the Inxwell process, designers can specify a lower basis weight, which uses less paper, yet not compromise the feel or quality of the end product.
- *Mohawk Options is also designed for on-demand printing, which also yields less paper.

Call your Mohawk merchant or (800) THE MILL for a copy of the Mohawk Options swatchbook.

For more information, call Laura Shore at (518) 237-1740, ext. 208.

Hammermill Papers Introduces New Linen Swatch Book Featuring Expanded, Recycled Product Line

Hammermill Papers introduces a new Linen swatch book featuring an expanded line of high-performance Hammermill Linen text, cover and writing papers. Hammermill Linen provides flawless printability and crisp, clear image quality in a textured surface.

Hammermill has added a writing grade featuring a new recycled watermark to its Linen text and cover grade lines for a complete value-oriented communications package. The new Linen writing includes five subtle business shades plus two whites matching the text and cover color palette. In addition, text and cover grades offer five deeper hues that coordinate with the lighter shades. All Hammermill Linen writing, text and cover grades contain a reclaimed fiber content of 20 percent post-consumer waste to meet current state and federal regulations for recycled content. Linen text and cover grades contain a 50 percent total recycled content.

Hammermill Linen is guaranteed to run on small and large offset presses, copiers, laser printers, ink jet printers and plain paper fax machines. The Hammermill Electronic Imaging Guarantee assures users these grades are formulated for use on virtually any type of non-impact electronic imaging or conventional lithographic presses.

All Hammermill Papers product lines including Hammermill Linen are acid-free and, therefore, considered "archival" quality that will remain legible and intact for more than 200 years.

For product swatch books or samples or for the Hammermill merchant nearest you, call (800) 242-2148.

For more information, call Jill Doster at (901) 763-7826 or Trip Jobe at (413) 572-9264.

Sue Cohn Helps You Find A Career That Works For The Environment New Expanded Edition Of Green At Work Presents Pathways To Greening Your Career

Published by Island Press in 1992, *Green at Work* was the first source of information to help non-technical but environmentally-concerned job seekers learn about career opportunities with environmental companies or within the newly emerging "green" corporate culture.

Now entirely revised and expanded, this indispensable volume again offers invaluable tools and strategies for launching a green career. Susan Cohn, Special Projects Coordinator at New York University's Stern School of Business, has expanded her scope beyond the business world to examine environmentally-focused, non-technical careers in a wide variety of fields including communications, banking and finance, design and the arts, consulting, public policy, non-profit, and more. "Society needs people in all careers who recognize the value of environmental integrity and who work along different routes to improve our approaches to solving our environmental problems," writes Cohn.

Every step of the job-seeking process is covered, from identifying personal values, skills, and goals, to researching potential companies and organizations, to interviewing. This completely updated edition includes the following:

- *profiles of more than 70 individuals that illustrate how people have woven their skills, values, and passions into their work
- *listings of more than 400 companies with contact names, addresses, phone numbers, information on what the company does, and its environmental programs and policies
- *listings of more than 50 resources including organizations, publications, and other sources of information
- *a bibliography of recommended readings

For more information, contact Lisa Magnino at (202) 232-7933.

Nature Magazines Rated On Environmentally-Sound Paper Use; Top Awards Go To Sierra And Earth Island Journal; National Geographic And Smithsonian Strongly Criticized For Consuming Large Quantities Of Virgin Paper

A new national survey has ranked the environmental commitment of nature and natural history magazines based on their use of recycled and chlorine-free paper. The analysis by Conservatree's Greenline found that all but one publication used at least some recycled paper but that few printed on the environmentally best stock.

Sierra Magazine earned Conservatree's "Friend of the Environment" award for using the most environmentally-sound publication-grade coated paper on the market. Sierra prints on paper with a fiber mix of roughly equal parts post-consumer, totally chlorine-free virgin hardwood, and groundwood fiber. Published bi-monthly by the Sierra Club, the magazine has a national circulation of about half a million.

Earth Island Journal was also lauded for its leadership role in using 100% tree-free and chlorine-free paper. That publication is printed on stock made from kenaf, a rapidly growing fibrous plant.

The only environmentally-oriented publication that does not use at least some recycled paper is Smithsonian. Conservatree President Alan Davis notes, "As an institution which receives nearly \$400 million in taxpayer support each year, Smithsonian should support the federal government's recycling commitment and publish on recycled paper."

National Geographic was criticized for "Major Environmental Damage" for using virgin paper for its entire text even though its cover is printed on recycled stock. "Since National Geographic consumes more paper than all other environmental publications combined," Davis said, "the failure to alleviate the damage it does to the environment is clearly the most egregious." Almost ten million copies of the magazine are distributed each month.

The quarterly newsletter, Conservatree's Greenline, reports on a wide range of issues dealing with all facets of the environmentally-sound paper movement. It is printed on recycled paper containing at least 15% post-consumer content. Sample copies are available by writing to 10 Lombard St, San Francisco, CA 94111 or by calling (415) 433-1000, ext. 31.

For further information, contact Bob Schaeffer at (617) 489-0461.

Caldwell's Recycling Bin Cover Solves Many Problems

Caldwell Industries, Inc., Des Plaines, Illinois, has created an adjustable, expandable curbside recycling bin cover which eliminates such problems as overstuffed recycling bins, trash blowing out, trash falling out, etc.

Manufactured from 100% post-consumer HDPE (high-density polyethylene), the "Put A Lid On It" bin cover keeps even the bulkiest trash, including plastic bottles and newsprint, where you put it.

For more information, contact Bob Roman at (708) 299-3202.

Fed Inks New Item Contract To Recycle Ink Jets

Ribbon Recyclers, Inc., a Colorado corporation providing printer cartridge recycling, announced it has been awarded a USA-GSA New Item contract to recycle cartridges for ink jet printers for the Federal Government. The more popular Ink Jets include Desk Jets, Bubble Jets, Exec Jets, and Plain Paper Fax machine cartridges from Apple, Brother, Bull, Canon, Epson, Genicom, Hewlett Packard, IBM, LEXMARK, Manesmann Tally, Memorex, NEC, Okidata, Panasonic, Radio Shack, Riocoh, Texas Instruments, and Xerox. Ribbon Recyclers, Inc. has provided ribbon and laser recycling to the GSA, businesses and governments. The company recycled 1 ton (2,000 lbs.) of ribbons in September. Over 23,000 printer models use cartridges that are suitable for recycling. Ribbon Recyclers' proprietary processes can recycle 98% of them.

Ribbon Recyclers employs people with disabilities and other special needs to perform the recycling service through its subcontractor, Goodwill Industries of Denver. Errol Rowland, President of Ribbon Recyclers, Inc. said, "Our customers are very satisfied with the results. Some report they have not bought a new cartridge since 1989. They will reuse one cartridge 2 to 40 times."

The US market for new printer cartridges is measured in billions of dollars per year, representing hundreds of millions of cartridges. Unfortunately, only a small percent are recycled. Rowland added, "Ink jet recycling is a relatively new concept with two major challenges. First, making people aware the service is available and desirable. Second, changing behaviour--people must be motivated to put cartridges in 'Used Cartridge' boxes rather than in the trash."

Federal, state and local governments along with industry are all encouraging people to cut landfill waste by up to 50% through recycling. Rowland acknowledged, "We know cartridge recycling is not a big step, but it is an easy step. And when the economic and social benefits are considered, it just makes sense to recycle. Users save as much as 50% of the cost of a new OEM cartridge, and they reduce cartridge toxic waste up to 90%. Ribbon Recyclers, Inc. also offers the added social benefit of job creation for people with disabilities."

Among Ribbon Recyclers, Inc. customers are computer firms, distributors, retailers, banks, the USA GSA, several local and state government agencies, and contractors.

For more information, contact Errol Rowland, Ribbon Recyclers, Inc. at (303) 377-4695 or (800) 477-3465.