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## Paper Use and Recycling in Academic Libraries

Michele Calloway  
*Southern Illinois University*

Darren Callahan  
*Southern Illinois University*

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## **Paper Use and Recycling in Academic Libraries**



Michele Calloway

Daren Callahan, Head, Cataloging Department  
Morris Library, Southern Illinois University  
[dcallaha@lib.siu.edu](mailto:dcallaha@lib.siu.edu)

As more government agencies mandate waste reduction for public institutions, awareness of the magnitude and extent of the environmental impact perpetrated by university communities has grown considerably. For example, the University of Buffalo equates the environmental impact of its campus to that "of a modest size city." (UB Green) In addition to government mandate many grassroots organizations have increased public awareness and concern about the environment. In October 1990, 22 presidents, rectors, and vice chancellors of universities from all over the world met in Talloires, France, to discuss the role of universities in environmental management and sustainable development. Together they composed the Talloires Declaration ([http://www.ulsf.org/programs\\_talloires\\_td.html](http://www.ulsf.org/programs_talloires_td.html)), a document that contains a plan for incorporating sustainability and environmental literacy into teaching, research, operations and outreach. Today, this document has been signed by more than 300 colleges and universities in over 40 countries. (ULSF July 2003). Signatories are divided equally among low, middle, and high-income countries and represent large and small public and private colleges and universities, community and technical colleges, and research centers.

In February of 1999, Southern Illinois University Carbondale signed the Talloires Declaration and committed the university to becoming a more environmentally responsible institution of higher learning. In addition, the university's recycling efforts increased in response to the Illinois Solid Waste Management Act (415ILCS 20/1 etseq.), enacted in 1990, which mandated that all state run universities develop recycling plans by January 1, 1995. (Plant)

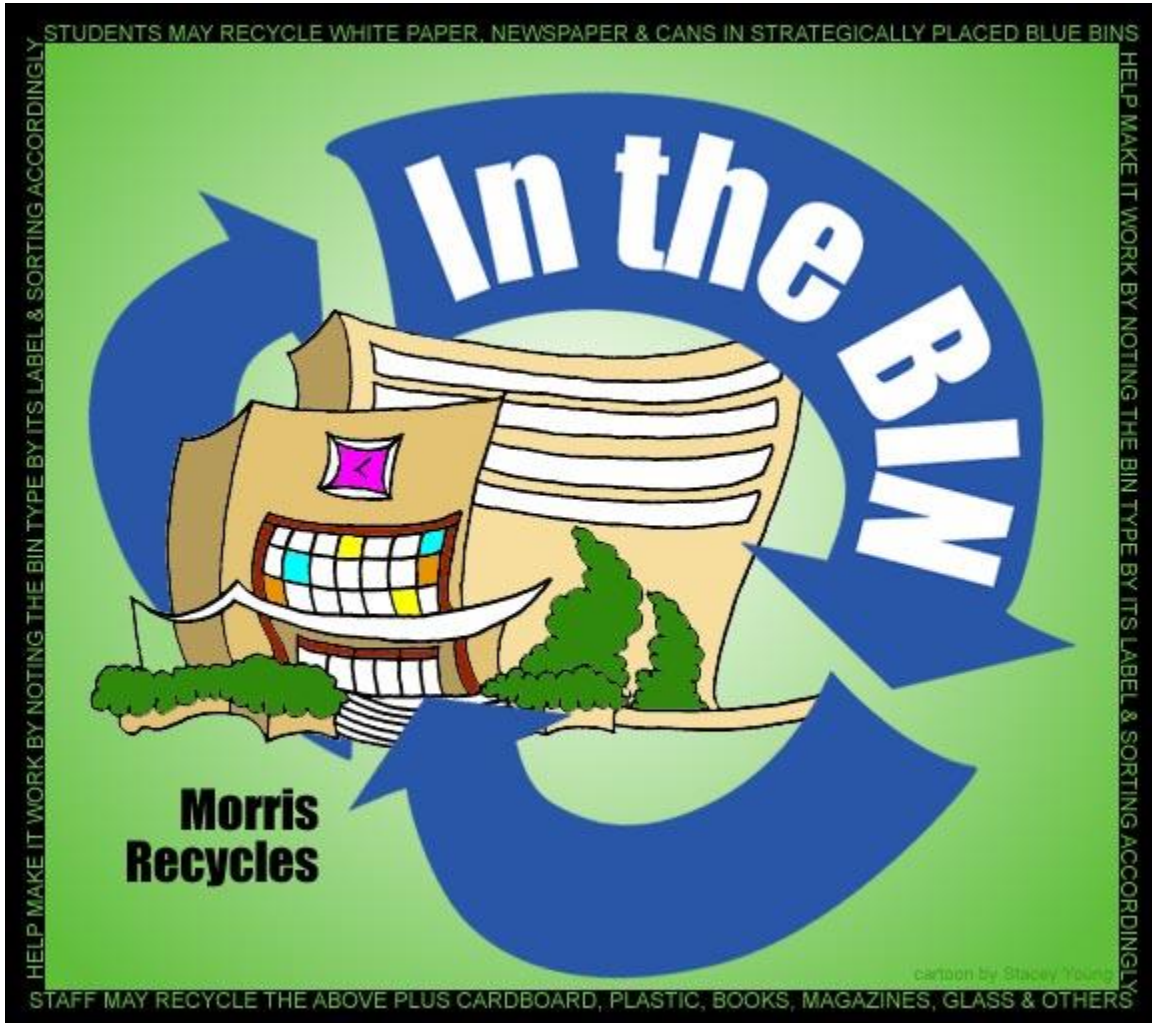
"Many college administrators estimate that almost one-third of the pages that leave their printers are wasted--discarded immediately in some cases, never even picked up in others." (Olson) Librarians are acutely aware of the impact the information explosion has had on the amount of paper flowing in and out of libraries. The previously touted paperless society has not happened. According to Kathleen Rickert in "Greening Our

College Libraries: Complete the Cycle of the Three Rs," "...more than two billion books, 350 million magazines, and 24 billion newspapers are published each year." (Rickert 825) Although electronic publishing is on the rise, there is no indication that the publishing industry plans to reduce print publications any time soon. As a result, there is intense pressure on librarians to deal with both the economic and the environmental impact of the information explosion.

In response to the growing interest in recycling and sustainability issues on campus, staff in Morris Library decided to evaluate the recycling efforts in the building. A Recycling/Environmental Task Force was formed to investigate ways in which Morris Library could increase recycling and develop more environmentally friendly practices. Members of the Task Force learned from the campus Recycling Program Coordinator that the library was one of the chief consumers and, by far, the largest producer of waste within the university community. They then surveyed the library to determine the extent and kinds of recycling available in public spaces as well as in private work areas. On the recommendation of the Task Force, library recycling activities expanded from recycling only white paper to also include color paper, mixed paper, shredded paper, slick paper and magazines, cardboard, #1 and #2 plastic, glass, aluminum, books<sup>1</sup>, and newspapers when it was discovered that the recycling program on campus collected all of these categories of material. Due to restrictions on food and drink in public areas, only paper (white and color) and newspaper were considered to be appropriate for recycling in public areas, and the university provides receptacles for aluminum cans and plastic outside the library entrances.

Increasing the number of bins does not automatically boost the amount of recyclables retrieved. In conjunction with the increased number and type of bins, education was needed to support the program. A report was made available to all staff through e-mail, and posters outlining new categories of materials to recycle and which materials belonged in which bins were placed in work areas. To inform the public an article appeared in *The Daily Egyptian*, the student newspaper, describing the library's efforts. A recycling screen saver (Fig. 1) was placed on public computers, and a display was mounted in an exhibit case in the lobby of the library. The case contained a bright, blue recycling bin overflowing with paper and it included a few tips on how to reduce paper waste in the library including: jotting down call numbers instead of printing; saving to a disk; thinking critically and printing only what is needed; and asking staff members to stop accidental print jobs.

Figure 1



At the end of the evaluation period, the Task Force submitted a report with recommendations to the library administration. These included saving paper by distributing all memos and notices through e-mail instead of through interoffice mail, encouraging the use of double-sided copying, discontinuing the use of order cards in favor of a web-based form or marked catalogs. For the public areas, recommendations included phasing out free printing and reducing hand-outs.

## Methodology

A decision to investigate current practices with environmental implications in various types of academic libraries grew out of the activities and findings of the Morris Library Recycling/Environmental Task Force. The authors felt that a good cross section of academic libraries would enhance the data, thus a survey instrument was created and sent to a wide variety of in public and private colleges and universities. Libraries were

randomly selected from each of the former Carnegie Classifications, from Research I through Baccalaureate II, resulting in a group of 336 schools. The websites of these schools were searched to identify the e-mail addresses of the library director or dean. E-mail addresses were not identified for eight libraries; therefore they were dropped from the pool. This left 328 libraries to whom to distribute the survey.

In view of the fact that the topic of the survey was paper use and recycling, it was especially important to be conscious of the environmental impact of distributing surveys and cover letters in paper. This led to the creation of a web version of the survey instrument and to requesting participation through an e-mail cover letter that also included a URL to the instrument. By assigning a unique URL to each institution the researchers were also able to track which schools had replied therefore enabling a follow-up e-mail to those libraries that had not replied in the first round. After the first mass e-mailing, twenty-one e-mails bounced back as undeliverable; these e-mail addresses were rechecked for errors and then sent to the libraries again. From the first e-mailing 82 libraries replied. Reminders were sent to the remaining 208 libraries. In total, 117 completed surveys were received for a response rate of 36 percent. The results of the survey have been grouped into the environmental concepts of reduce, reuse and recycle.

## **Reduce**

Librarians have long been aware that the increase in information available in full text on the Internet and through subscription databases has greatly increased the demand for printing. As a result, many libraries have instituted a fee-based system. In one study, done at Colorado State University, after a fee-based system was adopted, printing decreased from 35,000 prints in one week to 31,000 in a month. (Moothart 16) Of the 117 libraries that responded to our survey 54% charge a fee for printing. Of those libraries that did charge for printing 20% charged five cents or less per page and 66% charged between six and ten cents. Five percent of respondents charged twenty cents or more per page. When a fee was assessed it was most often applied to all patron types including faculty, students, employees and the general public.

Cost recovery was the reason most often cited (78%) by libraries in the survey for charging for printing, followed by the need to discourage the number of prints (18%). These results correspond with those reported by Ashmore and Morris. Moothart reports that the cost estimate for Colorado State University Libraries tripled between the 1996/97 and 1997/98. (Moothart 15) The results of our survey found 77% of libraries had been charging for five years or less. Patron response to the implementation of a fee-based system was mixed with only 54% of libraries reporting a positive reaction. Only 20% of respondents indicated that concern for the environment was a reason their library charged for printing.

Originally, the researchers assumed that more libraries would charge for printing due to the high costs associated with providing free printing. Why then did almost half (47%) of our respondents not charge? The most common reasons cited for not charging was that the libraries felt that the costs involved in managing a fee-based system were too expensive. Nineteen percent did not charge for printing because printing was subsidized through a university implemented technology fee. On the other hand, 55% of the libraries that do not currently charge for printing, do have plans to begin charging in the future. In addition to assessing a fee for printing, another method to control patron printing and reduce consumption is to purchase printers and photocopiers that support duplex printing. Twenty-eight percent of respondents reported providing duplex lasers and over half (56%) provide duplex photocopying.

The use of energy in supporting more and more equipment should be a cause for concern in every library. Sarah Creighton in *Greening the Ivory Tower* emphasizes the importance of buying photocopiers with the ability to go into power saving mode during periods of inactivity. (Creighton 143) Creighton also stresses the importance of purchasing energy efficient equipment whenever possible. The EPA provides guidance on this matter on their Energy Star website, <http://www.energystar.gov> (Creighton 142) The Energy Star program serves to help consumers identify energy efficient appliances for home or business. According to the Energy Star website there are over 11,000 product models in over thirty product categories that have the Energy Star label. (EPA) It is also important to make sure that when you buy equipment with the Energy Star label that the ENERGY STAR features are enabled. (EPA)

## **Recycle**

Statistics about waste in the United States are shocking, but one especially pertinent fact is that paper and paper products such books, magazines, and cardboard comprise nearly 40% of the solid waste stream in the United States. (Creighton 203) According to Rickert in her survey of academic libraries in Minnesota and Wisconsin, 88% of the libraries recycled office paper and newspapers. These results corroborate the findings of this study in which 92% of libraries recycled white paper at public workstations and over half (58%) have provided this service for over five years.

In addition to white paper many of the libraries reported providing recycling for other materials as well. Newspaper was recycled in public areas by 60% of the libraries and color paper by 59% of the libraries. Other materials recycled included aluminum (47%), plastic (33%) and glass (28%). Reluctance to recycle these non-paper materials may be attributed to library practices of not allowing food or drink in public areas. Although public areas witness a great deal of paper consumption, many more materials are used behind the scenes in staff areas. White paper recycling was provided in 93% of libraries. Sixty-three percent have provided recycling in staff areas for over five years. Seventy-

two percent recycle newspaper, 69% recycle color paper, 66% recycle aluminum, 39% recycle plastic, and 30% recycle glass. Other materials recycled in staff areas included cardboard (62%), magazines (49%), and books (31%).

### **Reuse**

Fifty-six percent of libraries that responded use paper with recycled content. Of these, 47% have been doing so for over five years. Most libraries that use recycled content paper do so because of environmental concerns (43%) or because of a university policy (23%). Twenty-two percent also reported switching because it was a library administrative decision. Those libraries that do not use recycled paper cited lack of availability (17%), prohibitive costs (13%), or no university support (11%) as the reason for not purchasing paper with recycled content.

### **Conclusions**

While it is difficult to predict what the future may hold in regard to paper use and recycling, without a doubt, academic libraries are sites of enormous consumption and they should be proactive in institutional improvements in waste management. A paperless society is unlikely to become a reality for a very long time, if ever, but what can libraries do now to discourage paper waste and encourage recycling? According to the results of this survey, libraries are taking steps to divert recyclables from the garbage. In the future, as people become even more accustomed to working in the electronic environment, thoughtless and excessive printing of documents simply to have hard copy will certainly diminish. As more students arrive equipped with laptops and PDAs the amount of paper used by patrons may also decrease. Already students are taking advantage of the e-mailing functions that are available through various indexes such as Proquest and EBSCO. Librarians should continue to take steps to control excessive and unnecessary printing by instructing patrons in marking articles and citations for printing and e-mailing articles. Staff can also show patrons how to use print preview, print selected pages or highlight text when printing from the Internet. The disadvantages of fee-based printing summarized by Ashmore and Morris must be weighed against the advantages, but it is the opinion of the authors that the possibilities outweigh the disadvantages. A fee-based system can discourage impulsive printing and promote conscientious use of the printer and, if a pay-to-print program is implemented with careful planning (Murphy), the protest from patrons should be minimal and the ultimate goal of reduced paper waste achieved. Libraries can also take steps toward closing the loop by purchasing recycled content paper for use in public and staff areas. While paper use and recycling are campus-wide concerns and require collaboration among all the units, libraries can become a model by allowing our decision-making to be guided by environmental protection principles in keeping with the Talloires Declaration.

1. The idea of recycling books in libraries may be questionable, but unwanted gift materials and library book sale rejects comprise the bulk of this recycling activity.



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<http://www.nwf.org/campusecology/index.cfm>

The Campus Ecology Program at the National Wildlife Federation offers a wide variety of resources and networking for students, faculty, and staff interested in making universities more environmentally sustainable.

<http://darkwing.uoregon.edu/%7Erecycle/links.htm>

University of Oregon's huge recycling links page.

<http://www.nrc-recycle.org/councils/CURC/>

This website provides information about the College and University Recycling Council (CURC) of the National Recycling Coalition <http://www.nrc-recycle.org/>.

<http://www.secondnature.org/>

Second Nature is a non-profit organization dedicated to promoting education for sustainability in college and university curriculums.

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[http://southernlibrarianship.icaap.org/content/v04n03/Calloway\\_m01.htm](http://southernlibrarianship.icaap.org/content/v04n03/Calloway_m01.htm)