

COPY PAPER



Each U.S. office worker uses a stack of paper four feet high, a total of 10,000 sheets each year!



Using both sides of 1/3 of that paper would save \$100 a year per worker!



Using 30% recycled content paper would save 25 million trees a year, they would cover a land area roughly equal to Glacier Bay National Monument.



In 1997, 99.6 million tons of paper and paperboard wastes were generated in the U.S. alone! Only 45.2% of that was recovered, still leaving 54.6 million tons of paper products to be incinerated or landfilled. Certainly, that is a lot of paper that could be recycled or reused in any number of ways.

Approximately 12,430 square miles of forest are being consumed by paper mills each year to be made into paper products. At this rate a forest the size of West Virginia would be gone in two years! Care in purchasing and simple adjustments on your copier or printer could save money, landfill space and environmental quality all at the same time!



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The US copy paper market is about to undergo a big change. The Federal Executive Order 12873 and the new order 13101 issued in September, 1998 mandates that all federally purchased printing and writing paper contain no less than 30% post-consumer fiber beginning December 31, 1998. Green Seal has reviewed those papers which plan to meet the federal deadline and evaluated them for their type of bleach, recycled content and brightness. These papers are produced by major manufacturers and are available across the country.

By conducting a quick internal paper audit your company can determine the areas of highest paper usage. The information can be used to develop alternative options to reduce paper use. Use the chart provided to estimate how much of each category is ordered each month and how much your office may be collecting for recycling.

A QUICK ESTIMATE OF YOUR OFFICE'S PAPER USE AND RECYCLING HABITS

Use this chart to estimate how much of each category is ordered each month and how much your office might be recycling.

PAPER TYPE	AMOUNT ORDERED (reams/month)	RECYCLED CONTENT? Yes/No	SEPARATED FROM TRASH? Yes/No
Copy paper			
Fax paper			
Printer paper			
Letterhead			
Other printing and writing papers (e.g., writing tablets)			
Other (e.g., file folders)			

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Choosing a “Green” Copy Paper

► Bleaching

Adding to the confusion created by piles of paper are the various options available with regard to bleaching and recycled content. Paper is bleached to remove spots and impurities as well as to further dissolve the organic material called lignin. Lignin is a compound which holds the wood fibers together and makes wood based paper which has not been de-lignified rough to the touch. Secondly, the chlorination process increases the brightness of the paper. Brightness is the percent of light that reflects off the paper surface. Unfortunately, the bleaching process produces dangerous organochlorine compounds such as dioxin and furans. Dioxin is a known carcinogen and is a suspected cause of reproductive, developmental and immune

system disorders in humans. These compounds are known to bioaccumulate, moving upward

The bleaching process produces dangerous organochlorine compounds such as dioxin, a known carcinogen

through the food chain with greater toxicity at each level. It is estimated that the paper manufacturing industry releases 1.5 trillion gallons of wastewater each year that has been contaminated with small

amounts of organochlorine compounds. Strong consumer concern and federal initiatives have forced many paper manufacturers to limit the amount of chlorine and chlorine derivatives used in paper production. Less damaging alternatives include hydrogen peroxide, ozone and enzymes.

Elemental Chlorine Free (ECF)

paper is processed without elemental chlorine but instead with the use of chlorine derivatives such as chlorine dioxide. While this limits the amount of dioxin emitted into the environment by 90-95%, it does not completely eliminate it. And unfortunately, many other dangerous compounds are produced that are harmful to aquatic biology, humans, or animals.

Process Chlorine Free (PCF)

paper is produced without the use of chlorine in the current production cycle. However, the recycled content of the paper may have been bleached with chlorine.

Totally Chlorine Free (TCF)

paper is manufactured without any chlorine compounds. Alternative chemicals such as ozone, hydrogen peroxide, oxygen or enzymes are used to delignify the pulp. The advantage of this production option is the elimination of hazardous chlorinated by-products. However, the cost of the technology is very expensive, therefore many manufacturers are hesitant to change until the market shows strong consumer support. Because there is no way to ensure that the recycled content is TCF, all TCF papers in this report are 100% virgin fiber.



Green Seal Guidelines

- Choose paper which has at least 30% post-consumer content.** This saves landfill space, lowers manufacturing impacts on the environment and saves trees.
- Choose the lightest basis weight paper for your needs.** This reduces the amount of material used during production. The basis weight is calculated as the weight of a ream of paper in a standard size. The most common basis weights for copy paper are 20 and 24 pounds.
- Choose PCF paper whenever possible.** This helps to remove some paper from the waste stream, as well as eliminate the production of harmful by-products in the present production cycle.

► **Recycled Content**

Green Seal requested information from paper manufacturers about both post-consumer and total recycled content. For many of the manufacturers, these two numbers are equal but there is a fair number which have differences between the two.

Post-consumer recycled content is fiber that has reached the consumer and returned to a manufacturer via community and industrial recycling programs. Using paper made with a significant portion of post consumer recycled content, actively removes some paper from the waste stream to the landfill or incinerator. By giving

paper a second life, more trees can remain standing for a longer period of time.

Pre-consumer recycled content is fiber that may include materials processed but left unused at the manufacturing mill, but it also includes paper which has been used by other industries and returned to the manufacturer.

Total recycled content is the combination of the two sources of recycled material. The best rule of thumb is to look for a product with the largest post-consumer recycled content. The higher the percentage, the less the burden on the environment.

MANUFACTURER CONTACT INFORMATION

Badger Paper Mills Inc.	1-800-826-0494
Domtar Papers	1-800-636-6827
Fort James Corporation	1-800-854-5345
International Paper Hammermill	1-800-242-2148
International Paper Springhill	1-800-223-1268
Mohawk Paper	1-800-843-6455
Neenah Paper	1-800-558-5061
Rolland Inc.	1-800-388-0882
Weyerhaeuser	1-800-793-0245

Cutting down on your paper use

Reducing the amount of waste paper coming out of your office can indeed help our environment and it can also save your office significant amounts of money. Once you have determined the areas of waste paper which need to be attacked, brainstorm ways to limit paper usage in the office. Here are some suggestions to get you started.

Reuse one sided copies for printing draft copies of documents or as scrap paper. Use this paper as your copier's default supply.

Reduce the number of pages you print by setting your copier default to duplex (copying on both sides of the paper).

Reduce the weight of your copy paper to cut down on the amount of materials used in production. Going from 24 to 20 pound paper can reduce your impact on the environment by 16%.

Reduce margin or font sizes used on your reports and therefore reduce the number of pages you print.

Reduce the number of your repeat mailings by combining information into fewer major mailings.

Reduce your copier image size by 29% to fit two images of 8 1/2 by 11 on one page. Word processors can reduce page output by choosing the option "2-up" to print two images on each page.

Buy the maximum post-consumer content paper available that meets your office needs.

because we want to have a hard copy. Often we distribute this information to co-workers and friends through paper copies instead of e-mail or disk. As a result we have a paper trail which could cross the country from Boston to San Francisco twice!

With recent advancements in technology virtually every office can find a recycled content paper which meets the office needs, without sacrificing quality.

► Electronic Options

Use electronic mail to distribute your memos and files around the office.

Try using a fax modem so you can distribute documents by connecting to a fax directly without having to print out a copy of the document to send through your fax machine.

Publish and order long documents on CD-ROM.

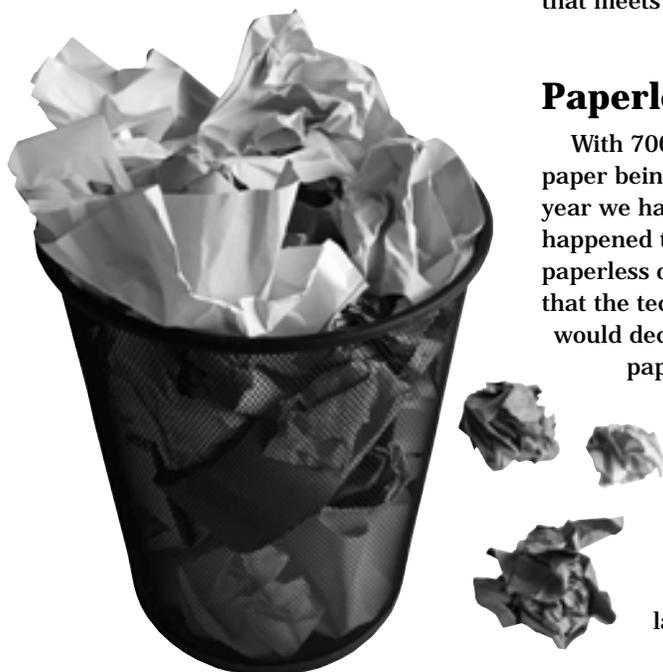
Become an integrated paperless office. Offices which have a computer network can purchase systems which incorporate optical character recognition, form processing, and archiving within the network using computers, scanners and various storage devices.

Paperless Office?

With 700 billion sheets of copy paper being used in the U.S. each year we have to wonder what happened to the prediction of the paperless office. One would think that the technology of data storage would decrease the amount of

paper offices use each year.

One factor has been the growth and development of the Internet. With so much more information available we are printing out large files simply



Recommended Copy Papers



MANUFACTURER	%PC	%TC	BLEACH	WEIGHT	BRIGHTNESS	OTHER
Mohawk Paper Satin	30	30	ECF	24#	Varies	Acid Free
Mohawk Paper Superfine Recycled	30	30	ECF	24#	Varies	Acid Free
Badger Paper Envirographic 100	100	100	PCF	20#	85	Acid Free
Domtar Papers SandPiper	100	100	PCF	24#	86	Acid Free
Fort James Corporation Eureka! 100	100	100	PCF	20#	84	
Fort James Corporation Eureka! 50	50	50	ECF	20#	87	
Fort James Corporation Eureka! Ultra Bright	30	30	ECF	24#	90	
Fort James Corporation Eureka! High Bright	30	30	ECF	20, 24#	87	
Fort James Corporation Eureka!	30	30	ECF	20#	84	
International Paper Hammermill Savings DP	30	30	ECF	20#	84	
International Paper Hammermill Fore DP Colors	30	30	ECF	20, 24#	Colors	
International Paper Springhill Recycled Relay DP	30	30	ECF	20#	84	
International Paper Springhill Relay Plus Colors	30	30	ECF	20#	Colors	
Neeah Paper Classic Crest	30	60	ECF	20,24#	91	
Neeah Paper Environment	30	100	ECF	24#	95	
Neeah Paper Atlas Bond	30	60	ECF	20,24#	95	
Rolland Inc. New Life DP 100	60	80	PCF	20#	88	Acid Free
Weyerhaeuser Recycled Office Paper	30	30	ECF	20#	84	Acid Free
Weyerhaeuser Recycled Husky Xerocopy	30	30	ECF	20#	84	Acid Free
Weyerhaeuser Recycled Husky Lasercopy	30	30	ECF	20#	88	Acid Free
Weyerhaeuser Recycled Lynx Laser	30	30	ECF	20, 24#	92	Acid Free
Other Recommendations						
Mohawk Paper Options Inkwell, Warm White Smooth and Vellum	0	0	TCF	24#	87	Acid Free
Neeah Paper EnvironmentCream	0	0	TCF	24#	95	



NOTES:

Recommended Copy Papers (1) meet or exceed the minimum requirement of 30% post-consumer recycled content and (2) are not bleached with elemental chlorine and are considered ECF or PCF.

Other Recommendations are TCF; however, they are 100% virgin fibers.

%PC= Post-consumer recycled content.

%TC= Total recycled content: including pre- and post-consumer fibers

ECF= Elemental Chlorine Free

PCF= Process Chlorine Free

TCF= Totally Chlorine Free

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US POSTAGE
PAID
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TAKE THE PAPER TEST!

QUESTION: Can you tell the difference between recycled content and virgin papers?

The advances in paper technology have allowed recycled content paper to look less and less like recycled content paper of years past. In fact, most people cannot tell the difference and often guess wrong. So take the test, examine your copy paper, can you tell that it has recycled content?

Note: The paper you are holding has a recycled content of 25% post-consumer waste.

