

Printing Green



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Lake Printing is committed to helping businesses stimulate the local economy and protect our environment.

THE HISTORY OF SOY INK AND IT'S BENEFITS

In 1979, the board of directors of the Newspaper Association of America asked their technical staff to look for an alternative to the petroleum-based ink used by newspaper publishers. At that time, petroleum prices were volatile due to problems with the OPEC countries and they wanted to work with resources that were more reliable.



"Today, soy ink may be the solution to the environmental health and safety concerns of the printing industry."

After years of testing on about 2000 different vegetable oil formulations, researchers decided that ink based on soy oil was an excellent alternative. Soybean oil, the same non-toxic oil used for cooking oil, salad dressings, and thousands of other foods is abundant, relatively inexpensive and exceeded all the technical demands. In 1987, after additional testing and refinement, a manufacturer was prepared to produce it. The Gazette from Iowa put it to test and it proved to be very satisfactory.


Today, soy ink may be the solution to the environmental health and safety concerns of the printing industry. It reduces the environmental burden of the industry because it is a renewable resource: soybeans. Almost half of all soybeans produced in America need no irrigation and as soybeans are growing, they temporarily remove damaging carbon dioxide, a greenhouse gas, from the atmosphere. Soy ink is naturally low in VOCs (volatile organic compounds, chemical compounds that evaporate and react to sunlight) and its usage can reduce emissions causing air pollution.

Soy ink is available for newspapers, magazines, commercial printing, packaging, business forms and

many other uses. Each form of printing requires a different type of ink and manufacturers have made various efforts to meet the demands of their customers.

Soy Ink Benefits:

- **Vibrant Colors:** Soybean oil's clarity allows pigments to reach their full potential, resulting in deep, rich bright colors. When used in newspaper ink, it shows an excellent outcome of pigments and delivers a high quality print.
- **Lower Rub-Off:** Soy ink shows a greater rub resistance. This is especially important for newspaper readers.
- **Cost Effective:** Since most of the cost in colored inks comes from the pigments used and not the vehicle portion of the formulation, the prices of soy ink colors are competitive with conventional ink colors. Soy ink also provides more intense color, which results in not using as much ink. As a result, more materials can be printed with less ink which reduces the cost.
- **Environmentally Friendlier:** Soy ink is removed more effectively from newsprint than petroleum ink during de-inking, resulting in less paper fiber damage and a brighter paper. Also, the waste is not considered hazardous and can be treated more easily, completely and cost-effectively.
- **Stability:** Soy ink maintains its lithographic stability throughout the entire print job so fewer adjustments have to be made during production.

Considering all the benefits, Lake Printing is proud of their long time commitment to printing with soy ink and helping protect the environment. 



6815 Highway 54 • Osage Beach, Missouri 65065
573-346-0600

www.lakeprinting.com

PRINTING GREEN: 12 THINGS YOU NEED TO KNOW

Essential tactics to assure environmental responsibility in printing practices.

~By Cassie Hart, Dynamic Graphics Magazine

Many of us make a conscious effort to practice environmental responsibility. We haul old newspapers to local recycling centers. We use ink refi ll kits instead of buying new cartridges for our printers. And who doesn't have at least one blue recycling bin wedged underneath the desk?

But is this enough? Noah Scalin, founder of ALR Design doesn't think so. "Social consciousness isn't just about making good paper and ink choices," he says. "A lot more of it has to do with how work is produced." For designers, this means keeping the environment in mind when planning projects. The following guide to "more green" offers 12 ways to incorporate environmental awareness into your work.

1. Learn the lingo.

You'll need to be familiar with industry jargon to appropriately select environmentally friendly papers. Here are a few terms you'll often see:

Virgin fiber - 100-percent "pure" fiber from an original source

Post-consumer content - Waste recovered from consumers and recycled

VOCs - Volatile organic compounds (such as occur in petroleum-based printing ink)

PCF - Processed chlorine-free

TCF - Totally chlorine-free

ECF - Elemental chlorine-free

2. Preserve and conserve.

The Recycled Products Cooperative estimates that over 100 million trees are cut each year to supply fiber for writing and printing papers in the United States. This is not only detrimental to forests, but to air quality and water reserves as well.

One way to preserve resources is to purchase recycled paper with high levels of post-consumer content. Using recycled paper saves landfill space and minimizes water and energy consumption. Check recycling symbols to see what percentage of recycled fiber was used during the manufacturing process.

3. Think about ink.

Do you know how your printer disposes of unused ink? If you're unsure, ask. Petroleum-based inks leach VOCs—which cause cancer and birth defects—into the soil when printed papers end up in landfills. These toxins can also be released into the air as fresh inks dry.

Soy ink is an excellent alternative to petroleum-based inks. Soy ink uses soybean oil that's naturally low in VOCs. This smart substitute is sustainable, efficient, and cost-competitive. Many newspapers, magazines (including this one), and other materials are now printed with soy ink.

4. Do it digitally.

Greg Barber www.gregbarberco.com, an environmentally oriented paper and printing specialist, also recommends digital printing for economic reasons: Digital is ideal for short-run, four-color work for business cards, stationery, promotional pieces, and most print work that is less than 1,000 sheets of 14 x 20 inches.

This printing method even has advantages over soy inks. While soy is comprised of 86-percent oil—which isn't biodegradable—digital printing uses 100-percent nontoxic toner. Toner-based inks also produce less chemical waste.

"Making a commitment to practice environmentally responsible design can be challenging, but it's doable and highly rewarding. Starting today will help ensure a healthier quality of life for tomorrow."

5. Consider alternative papers.

Move over, pulp-based paper. A number of alternatives to traditional papers are now available, and Barber recommends several "tree-free" varieties, such as Denim Blues (100-percent reclaimed blue jean cotton), and synthetic papers by Yupo because of their environmental attributes and durability.

For certain projects, Barber suggests papers made from Kenaf and hemp, and a newer paper called TerraSkin, which is made from ground stone. "TerraSkin is almost as strong as (synthetic) FedEx envelopes and it prints like a coated sheet," he says. It also uses less ink, and is nontoxic and waterproof.

6. Choose better bleaching solutions.

Brighter, whiter papers are created by various bleaching processes. It's a good idea to have a basic understanding of how manufacturers process their products so that you can select the best, most environmentally friendly papers for your projects.

Elemental chlorine was once extensively used to brighten paper products, but now chlorine dioxide (used in swimming pools) is a common substitute. This process yields ECF papers. Although chlorine compounds are safer than pure chlorine, some pollution still results. Better choices include PCF and TCF bleaching, which substitute oxygen-based compounds for chlorine compounds. Only the recycled portion of a recycled sheet has been bleached with PCF. Fewer TCF papers are available today because most papers contain some recycled content—TCF relates only to 100-percent virgin papers.

For more information about how we can help you print greener contact us at 573-346-0600 or visit us online at www.lakeprinting.com

Only products deemed acceptable by the Chlorine Free Products Association are granted PCF and TCF emblems. Look for the symbols when purchasing recycled paper.

7. Educate your clients.

Many companies today are concerned with producing print materials and packaging made with sustainable resources. IBM, Coca-Cola, and Mc-Donald's are just a few major businesses making an effort to publish shareholder reports on 100-percent recycled post-consumer content. But not all clients are familiar with "green" design and printing processes. You may find that you need to act as an ecofriendly project advisor.

8. Practice what you preach.

Set a good example to convince others to follow your lead. Consider incorporating these methods:

Conserve ink use by determining whether print projects need to be full color. Could a two-color design suffice instead? Maximize ink staying power by substituting a Pantone color for metallic inks, which tend to degrade. (This reduces VOC emissions, too.)

Avoid wasting paper by designing to standard press sheet sizes (e.g., 23 x 35, 25 x 38, 26 x 40, 28 x 40). If a job is large enough, your printer can order a special sheet size from the mill. Since paper is sold by the pound, this approach can also save your client money.

9. Offset cost with creativity.

Some environmentally friendly products may be a bit more expensive. It's important, however, not to view pricing issues as constraints. Instead, think creatively to help balance benefits with costs.

Design multifunctional projects - e.g., selfmailer/ program combos—to economize when using more expensive paper. Also, combining projects whenever possible is wise; one idea is to print business cards and postcards from the same recycled paper. In the long run your clients may save money, and they'll also be honoring the environment.

10. Know industry standards.

The Environmental Protection Agency (EPA) mandates that federal agencies must use uncoated printing and writing papers containing at least 30-percent post-consumer content. Coated and commodity papers must contain a minimum of 10 percent. Consider using these guidelines when selecting paper for your projects, too.

Become familiar with other industry-issued standards. Important stamps of approval include the emblems of the Forest Stewardship Council (FSC) and Chlorine Free Product Association (CFPA). For these symbols to appear on products, they must meet specific standards determined by the International Standards Organization (ISO).

11. Evaluate projects individually.

The first priority in design is to create an appealing, functional piece of work. "It's imperative to do good design from an aesthetic standpoint," Scalin says. But he also urges designers to consider options that will leave behind less waste. "Lots of what's designed is thrown in the trash. Using recycled materials is necessary because so much is thrown away."

If a client won't switch to paper with a higher percentage of post-consumer recycled content, try finding a way to reduce the number of pages used instead. You might also recommend different paper types for different sections. For example, some publications use high-quality coated paper for advertisements and uncoated paper with higher postconsumer content for editorial sections.

12. Stay informed.

Being environmentally responsible means staying current with new products and practices. Check out the following to see what others are doing to help keep our quality of life at a premium:

Conservation technology

Waterless presses

Water washable inks eliminate VOCs from the printing process. www.waterless.org

Windmill energy

This alternative energy source produces nonpolluting, wind-generated energy to manufacture 100-percent post-consumer paper. Mohawk Paper is a leader. www.mohawkpapers.com

Special interest groups

Compostmodern

This conference premiered in 2004 and is aimed at environmentally conscious designers/artists. www.aigasf.org/compostmodern/compost.html

Business for Social Responsibility

Annual conference where designers can meet, see, and hear from business leaders concerned with social responsibility issues. www.bsr.org/bsrconferences/index.html

Graphic Alliance

Join a community of socially conscious designers. www.graphicalliance.org

Making a commitment to practice environmentally responsible design can be challenging, but it's doable and highly rewarding. Starting today will help ensure a healthier quality of life for tomorrow.

Sustainable Symbols

You can send a green message with these eco-friendly emblems.



The Forest Stewardship Council (FSC) and Sustainable Forest Initiative (SFI) work with businesses and organizations to promote responsible forestry practices. Use of this trademark is restricted to those who comply with current standards and regulations.

The Soy Seal appears on many products printed with soy inks. Its presence on your print projects announces that you are concerned about sustainability issues. 

What is NCOA?

~Nora Jones, Esitimator/Purchasing & FSC-SFI Coordinator

Many mailing services clients have been hearing a lot about NCOA lately. We at Lake Printing would like to try and simplify some of the mailing changes for you by clearing up a few questions you may have. The USPS (United States Postal Service) is working very hard to become greener, more efficient and produce less waste.

NCOA – National Change of Address. In an effort to reduce undeliverable mail pieces before it even enters the mail stream the USPS has implemented the NCOA link system. NCOA helps reduce “undeliverable-as-addressed” (UAA) mail by correcting input addresses prior to mailing. Private sector mailing companies have access to over 160 million mailing records through the USPS licensed software. An attempt is made to match each name and address to the NCOA link. They gather this information from change of address cards. When the clients list is updated it matches the old address with the new one and immediately changes the mailing list to reflect the new address so the mail is going at all times to the proper recipient. This service does impose a fee upon the client every few months, but the potential savings usually outweigh the fee.

Features and Benefits of NCOA

- Reach more of your customers by obtaining their current address
- Identify undeliverable and incomplete addresses
- Cut your mailing costs and qualify for postal discounts
- Increase postal processing efficiency & delivery
- Choose 48-month or 24-month processing

In addition to change of address information, NCOA also will return your mail with an explanation of why the piece was not delivered. The client can use this information to further prune their mailing lists or find out where their potential customer went. 🌱

Dispelling “GREEN MYTHS”

~By Willow Cook, www.techsoup.org

Green (Paper) Is Beautiful

One common misperception among nonprofit and for-profit organizations alike is that eco-friendly means lower quality.

“When recycled paper first came on the market it was rather brownish,” said Renourish Founder Benson. “Today, it is nearly indistinguishable from virgin-fiber papers. I hung up two pieces of paper — one recycled/PCW and the other virgin-fiber — in a gallery side by side. No one could tell the difference. Even better, when printed on, both papers perform equally well. However, the myth still persists that recycled/PCW papers contain seeds, are brown, and are of lower quality. This is simply untrue.”

Telschow suggests that nonprofits talk to an eco-friendly printer to better understand their options. “The biggest deterrent to (printing green) is lack of information,” he said, noting that a printer can help you determine what types of papers, inks, and coatings can give you the quality you want and stay within your budget.

Offsetting Costs

Another common deterrent is the misconception that printing green is always more expensive than using traditional printing methods. However, this isn’t always the case. Vegetable-based inks are often competitively priced with petroleum-based; carbon-neutral printing is no more expensive than traditional methods; and many recycled, TCF, and ECF papers are in fact less expensive than virgin.

Telschow notes that because there are many factors that contribute to a printed piece’s price — including the size of the project, the press you use, and even the time of year — it’s important to work with a printer that can find the best solution for your organization’s budget.

Keep in mind, too, that as more organizations like yours invest in eco-friendly options, the price will eventually decrease. “It is cost-efficient to make recycled paper as it requires less energy (than virgin),” said Benson. Yet, “there is often a slightly higher premium for recycled paper. That is largely based on supply and demand issues. The more we request recycled, PCW (paper), the more the paper industry will supply, and costs will even out. Printers pollute and pollute badly. Why should this be OK? Choosing to not support those practices is to vote with your dollar.”

Even if you discover that going green means paying more, there are still many ways you can offset the costs:

Consolidate

Instead of holding four mail campaigns a year, try sending out three eco-friendly ones. The positive publicity generated by going green may in fact improve response rates, and you’ll be more likely to make the most of what you do send out. Or, offset costs with creativity: “Design multifunctional projects — for example, self-mailer/program combos — to economize when using more expensive paper,” suggests Dynamic Graphics’ in its Printing Green article. “Also, combining projects whenever possible is wise; one idea is to print business cards and postcards from the same recycled paper.”
Bypass the Middle Man

Sourcing and managing a print project is not as complicated as it might sound, and will help you avoid high markups from graphic designers. Ask your designer to send you print-ready files, and then work with the printer on delivering and proofing them. Explain that you are a nonprofit and are trying to save money; many printers will be happy to help you through the process. Alternatively, some designers may even be willing to forego the markup when they know they’re supporting a good cause.

Share the Glory

Another way to offset costs is to ask a vendor to chip in. Some printers will reduce their price if they can put their logo on the piece, and many will do so unobtrusively. Likewise, you could ask one of your funders to help cover the costs in exchange for a small promotion on the piece.
Keep It Exclusive

Benson notes that some printers will offer discounts if you bring all (or most) of your business to them. “Choosing a printer to print your literature exclusively can result in a contract that can reduce costs the more work you send them,” he said.

Promoting green practices not only makes your nonprofit look good — it can motivate others to do the same. For when other organizations see how good your piece looks, they might be inspired to go green, too. 🌱