

**Boise State University**  
**ScholarWorks**

---

English Faculty Publications and Presentations

Department of English

---

1-1-2007

# Go Green: Making the Case for Eco-Friendly Printing at Your Organization

Roger Munger  
*Boise State University*

---

©2009 IEEE. Personal use of this material is permitted. However, permission to reprint/republish this material for advertising or promotional purposes or for creating new collective works for resale or redistribution to servers or lists, or to reuse any copyrighted component of this work in other works must be obtained from the IEEE. Munger, R. (2007). Go Green: Making the Case for Eco-Friendly Printing at your Organization. In *Proceedings of the 2007 International IEEE Professional Communication Conference*, Piscataway, NJ: Institute of Electrical and Electronics Engineers. DOI: [10.1109/IPCC.2007.4464096](https://doi.org/10.1109/IPCC.2007.4464096)

# Go Green: Making the Case for Eco-Friendly Printing at Your Organization

Roger Munger  
Boise State University  
rmunger@boisestate.edu

## Abstract

*Relying on 100-percent virgin paper and petroleum-based inks, traditional printing strategies leave a large and damaging ecological footprint on our planet. Green-minded consumers concerned about our environment are pressuring businesses to adopt green printing practices—and rewarding those who do so with their dollars. The development of new eco-friendly inks, paper, and print processes have made it easier for professional communicators to take their companies in a green direction and print eco-friendly documents. This paper discusses strategies for being an advocate for environmentally responsible printing practices and describes some of the eco-friendly and price-competitive print options now available. Keywords: activism, eco-friendly printing, environment, green.*

## Introduction

Going green is big business now. From green-certified buildings [1,2] and socially responsible investing [3] to environmentally friendly clothing [4,5] and organic food [6], organizations have discovered that people want to support businesses that not only deliver a quality product but do so in an environmentally friendly manner. Although concern for the environment can be traced back centuries [7], the modern environmental movement likely started in the 1960s when Rachel Carson published *Silent Spring* in 1962 and when John McConnell, a peace activist, proposed at an United Nations Educational, Scientific and Cultural Organization (UNESCO) Conference on the Environment a global holiday called “Earth Day” in 1969. Unfortunately, for the next four decades, organizations such as Green Peace, Sierra Club, PETA, and Earth First! led the environmental movement and scored some major victories for our planet and its inhabitants but were never really viewed by the majority as anything more than tree huggers and activists (at best) and eco-terrorists (at worst).

However, over the past three or four years, concern for the environment has finally reached the consciousness of mainstream consumers, and businesses have started to take notice. The Consumers Union, for example, reports that 138 different eco-labels appear on consumer products [8]. Popular magazines focused on consumerism such as *Vanity Fair* (May 2006, 2007), *Elle* (May 2006), and *Canadian House & Home* (May 2007) are publishing “green” issues. Fair trade certifications, indicating environmentally and socially responsible trade practices, now appear on a variety of products such as coffee, tea, olive oil, cashews, and chocolate. Businesses are learning that considering the environment when making business decisions appeals to green-minded consumers—a rapidly growing market [9,10]. Of course, outdoor companies such as Patagonia [4], Clif Bar [11], and REI [12, 13] have been making environmentally based business decisions for some time. However, you might be surprised to learn that Home Depot is the largest buyer in the world of wood certified by the Forest Stewardship Council, Nike is the largest buyer of organic cotton, and Starbucks is the largest buyer of fair-trade coffee [10].

Some businesses have been reluctant to make changes and been the target of activist campaigns. For example, ForestEthics, a nonprofit environmental organization, took issue with the one million catalogs printed on 100 percent virgin (i.e., no recycled content) paper and mailed *each day* by Victoria’s Secret [14]. After pressure by ForestEthics, Limited Brands, the parent company of Victoria’s Secret, agreed to use recycled-content paper [15]. Other big catalog distributors such as Williams-Sonoma followed suit. For example, take a look at the back cover of your next *Williams-Sonoma Catalog*. You’ll see a small green label indicating that the catalog now uses paper “from well-managed forests, controlled sources and recycled wood or fiber.”

What does “going green” have to do with professional communicators? Well, one of our primary work products is the printed word. Of course, with our increasingly wired society we have been able to make more information available online, to edit online, and to send electronic correspondence. You would think that this

would have resulted in less paper being used. That's not the case. For instance, when an organization begins using e-mail, according to the New Jersey Higher Education Partnership for Sustainability (NJHEPS), paper consumption *increases* by 40 percent [16]. I had a colleague who printed every e-mail message, read them, and then filed them in a steel cabinet. Moreover, paper consumption in U.S. offices is growing by about 20 percent each year [16]. In addition to our runaway paper consumption, mainstream printing processes damage our environment. Common printing and paper production practices consume nonrenewable energy sources and release toxic gases called volatile organic compounds (VOCs) [17]. The most common inks in use today are derived from petroleum (a nonrenewable energy source) and make paper harder to recycle. In a nutshell, many professional communicators work for companies that sell or supply printed materials that are contributing to the destruction of our forests, polluting our water, introducing carcinogens into our bodies, and using nonrenewable petroleum products. This doesn't have to be the case. Alternatives do exist. If companies such as Home Depot, General Electric, Anheuser-Busch [10], Citigroup [18], and Lockheed Martin [19] can adopt eco-friendly business practices, your company might be able to do so as well. This paper discusses how you might make a case for "going green" at your company and describes the eco-friendly print options you have for your clients and at your own desk.

## **Making the Case for Going Green**

"Going green" at your organization simply means being aware of your organization's responsibility to the environment and making decisions based on this responsibility. Should you even try making the case at your company? Yes, even if it's just a little bit. It's not about changing company policy overnight. It's not about saving the planet single handedly. Instead, going green is about being an advocate for the environment. As a professional communicator, you are already in a position to serve as a reader [20] or user's advocate [21]. You already have experience educating software engineers, marketers, managers, and other workplace colleagues about users' needs. Being an advocate in the office for the environment is a natural extension of a professional communicator's role in the document design and production process.

Moreover, at least one of our professional organizations believes integrating environmental thinking into our decision making is one of our professional duties: the Institute of Scientific and Technical Communicators' Code of Professional Practice under "Duties to the Profession" states, "Include protection of the environment

and the preservation and improvement of quality of life as factors when making operating decisions" [22]. In addition to going green because it's "the right thing to do," advocating for the environment might be one of our professional duties. In later sections, I describe some of the eco-friendly choices you have for print projects. Below I describe ten strategies for making the case for going green at your company.

### **Follow your print projects from start to landfill**

Before you can advocate for change, you need to have a clear understanding of the entire life cycle of your print projects. Pick a print project and follow its development, production, use, and eventual disposal. This can be a project you are just starting or one you have just finished (in which case, you can work backward following the paper trail). By clearly understanding the rhetorical situation (e.g., audience, purpose, and context), you can learn places in the lifecycle of a document where you can lessen its environmental impact.

During a document's development, you might learn that it is primarily reviewed in hard copy format (an opportunity to move some of this process online) or you might learn that the audience for this document doesn't expect or need a slick publication (an opportunity to use paper with a higher percentage of recycled content). During production, you might learn that the document is printed overseas, using a large amount of nonrenewable energy to ship it back to your clients (an opportunity to locate a local printer). If you watch people use the document, you might learn that it is lightly used (an opportunity to use a lighter weight cover). Finally, you might learn that the end user reads the document and immediately throws it out (an opportunity to move the content online or to educate your users about recycling options in their area).

### **Educate yourself about the issues**

Getting involved can be intimidating. However, you don't need to be an expert, for example, on the timber industry, paper, inks, or printing processes. You can, nonetheless, read about these topics, familiarizing yourself with the main issues and concepts. Green-focused companies and not-for-profits with an Internet presence are good places to start. I recommend you start with a visit to the following sites:

- **ForestEthics**, an organization committed to saving endangered forests, provides reports and other information to help you take action [23].
- **Environmental Defense**, an organization founded by scientists 40 years ago, helps

organizations quantify the benefits of improving efficiency and protecting our environment [24]. Be sure to read Citigroup's *Copy Paper: Hidden Costs, Real Opportunities* [18].

- **Forest Stewardship Council (FSC)**, a not-for-profit organization devoted to encouraging the responsible management of the world's forests, provides information on paper merchants and printers in the U.S. with FSC chain-of-custody certification [25].
- **Greenguardian.com**, launched in 2003 to help citizens "make environmentally-responsible purchasing and disposal decisions," the site contains *The Environmentally Preferable Purchasing Guide* (see sections 4 and 5 on paper and inks) as well as case studies of how organizations have reduced paper consumption [26].
- **The Government Purchasing Project**, "dedicated to protecting the environment and human health through market-based strategies," provides information on paper reduction and chlorine-free paper [27].
- **New Leaf Paper**, an industry leader in the "development and distribution of environmentally superior printing and office papers," can provide your organization an environmental benefits statement in a New Leaf Paper Eco Audit (see Figure 1) [28].

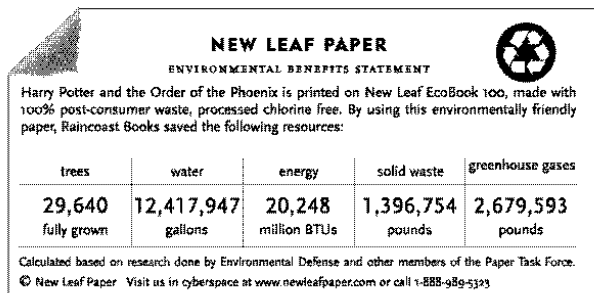


Figure 1. Sample New Leaf Eco Audit.

## Calculate the impact

Once you have an idea of the issues involved, you need to gather data and calculate the impact. For instance, to calculate the impact of paper consumption at your company, you will need to know what types of paper are being used and the total weight of that paper. A ream (500 sheets) of standard office copy paper, for example, weighs approximately five pounds. For measuring paper consumption around your office, talk with the person that buys the copy paper. Also, depending on the features of your copy machine, you can track how many copies are

made by individual, by project, or by period. For measuring paper consumption for print projects outsourced to a commercial printer, give your sales representative at the print company a call.

With some hard data in hand, you can turn to the Internet for some tools that will help you calculate the impact. For example, you can use the Environmental Defense Paper Calculator [29] to calculate the baseline impact of your current print project or office paper consumption in terms of wood use, total energy, greenhouse gases, wastewater, and solid waste. You can also calculate the difference in impact if you switched to recycled-content paper. Using this calculator, for example, I was able to make the following statement at my place of business: "In 2006, we made approximately 618,000 copies and used over 834,000 sheets of white paper. The environmental impact for this amount of consumption is 14 tons of wood, 160 million BTUs, 23,714 pounds of greenhouse gases, 79,496 gallons of waste water, and 9,495 pounds of solid waste." That got the attention of a few colleagues and provided a starting point for a conversation on how we could lessen our ecological footprint.

Similarly, you can use one of the many carbon- or ecological-footprint calculators available on the Web to roughly measure the impact of such business activities as shipping documents, travel, industrial production, and building energy use. Such data is invaluable when trying to persuade decision makers to switch to more eco-friendly paper and print practices.

## Start with small goals and build on your success

Little things can make a big difference. Start with small projects for which you expect little or no resistance. Get colleagues comfortable with the changes you are suggesting. Let them see that the changes don't compromise the product or break the bank. You will feel invigorated by your success and your colleagues will be more open to change. The last thing you want to do is start with a huge project, stir up a big cloud of dust, and have it fail. You will quickly burn out and lose all credibility in your office. Going green is a learning process for both you and your colleagues.

## Find like-minded colleagues

You cannot save the world all by yourself: it is too much work for one person. Look for people at your workplace or in your community or at professional meetings who are already making eco-friendly decisions at the office or in their personal lives. They might be willing to help you. You can also let people come to you about

your environmental practices at work. Practice making eco-friendly decisions on the projects for which you have control over, or, at the very least, at your desk. People will notice (eventually) and start asking questions. Some people genuinely want to do more; they just do not know how. This does not mean you cannot be proactive and approach colleagues and decision makers. Having a few like-minded colleagues will make your job a little easier and little more enjoyable.

### Use the right kinds of evidence

People are often persuaded by four kinds of evidence: commonsense arguments, numerical data, examples, and expert testimony [30]. Use your audience-analysis skills and determine what will persuade the decision makers at your company:

- **Commonsense:** “Most people want their children to inherit an environmentally healthy and socially just planet. I don’t have all the details, but it seems our company could be doing more to ensure that this happens.”
- **Numerical data:** “According to the Institute of Local Self-Reliance (1997), the U.S. printing industry released more than 41 million pounds of toxic petrochemicals into the environment in 1995” [31, p. 1].
- **Examples:** “Dell Computers, for instance, set a goal two years ago to move 50 percent of its print materials to 100 percent post-consumer recycled paper by 2009. The company is already 90 percent of the way there” [9, p. 4].
- **Expert Testimony:** “In November 1992, about 1,700 of the world’s leading scientists, including the majority of living Nobel laureates in the sciences, issued an appeal entitled ‘The World Scientists’ Warning to Humanity.’ Part of the appeal stated, ‘Human activities inflict harsh and often irreversible damage on the environment and on critical resources. If not checked, many of our current practices put at serious risk the future that we wish for human society and the plant and animal kingdoms, and may so alter the living world that it will be unable to sustain life in the manner that we know’” [32].

### Think outside the box

A traditional meeting where you drag out the PowerPoint slides documenting the damage we are inflicting on the planet through our paper consumption and print practices, shaming the audience with statistics illustrating their own complicity, and delivering a 12-step solution might not work in every case. You might need,

for example, to hold a contest, post signs [33] at copiers (see Figure 2), host a potluck, start a newsletter, laugh at yourself, throw a party, tell a story, or make a modest proposal.



Figure 2. Sample poster that encourages double-sided printing and copying.

### Be persistent but polite

Activists can get on people’s nerves in a hurry, if their timing is wrong or if they are rude. For example, if your harried colleague arrives late for a meeting with a stack of single-sided handouts, that is not the time to preach about saving the forests and the virtues of double-sided documents. No one likes to be singled out or picked on. Put off your conversation for a more appropriate time. Lead by example, do your homework, and approach the issue as you would any other user or document design issue. Finally, although it might be hard at times, always be polite. Rude people are often tuned out.

### Be prepared for the financial rebuttal

I was once told, “The easiest way I can put this is that using recycled paper would be an environmentally based decision, not a financial one.” There’s so many things wrong with this statement that it made my head want to explode. Once I calmed down, I realized that it represented a common perspective appropriately held by many managers. Most businesses are in business to make money. The bottom line, unfortunately, in some companies drives all decisions. You can’t ignore it. John Browne, the former chief executive of BP and green activist, couldn’t get his own company to ignore it: “No matter how much he wanted to steer his company in a green direction, profit motives are what ultimately set the course” [34]. The timing might not be quite right at your company or in your industry. However, the tide is shifting, as reliable indicators of our impact on the planet become more widely known, as more studies show that going

green is good for a company's bottom line, and as alternative paper fibers and inks continue to drop in price. Be patient, your voice will eventually be heard.

### **Acknowledge contributions and encourage change**

When someone does something good for the planet, give them public thanks and appreciation. Use a strategy used by seasoned activist organizations: publicly acknowledge and encourage companies when they do something good for the environment. For example, the Organic Consumers Association publicly applauded Burger King Holdings, Inc. for "sourcing pork and eggs from suppliers that do not confine their animals in crates and cages" [35]. Animal-rights activists, of course, want the fast-food giant to do more but also acknowledge the importance of this decision. PETA (People for the Ethical Treatment of Animals) let people know when PepsiCo joined Welch's, Ocean Spray, and POM Wonderful in discontinuing the use of animals in laboratory tests [36]. After adopting a green approach to catalog production, Victoria's Secret senior executive Tom Katzenmeyer was invited to speak at a Forest Leadership conference in May 2007 [37].

When your company or someone within your company does something good for the environment, let your colleagues, clients, vendors, and competitors know. Even small steps should be acknowledged and encouraged. At your company, for instance, send an email congratulating your colleagues on their reduced paper consumption, no matter how small a reduction. If you switch to recycled-content paper for your annual report, add a statement to the report that announces this change to your shareholders.

Be the catalyst that pushes the environmental impact of print projects into your organization's consciousness. You can raise your company's eco-awareness gradually. You can also learn how good it feels to be a professional communicator who can meet the needs of your audience *and* be gentle to our planet. Once you have decision-makers willing to consider green printing practices, you can present them with eco-friendly options from which to choose. The following three sections will describe those options.

### **Going Green at Your Desk**

Change can begin at your desk. The average American worker uses a sheet of paper every 12 seconds [16]. One of the best ways to go green is to start with what you can easily control. Below are five strategies for reducing your paper consumption at your desk.

### **Stop, think, and then print, if necessary**

Not every document and page needs to be printed. Before you select the print icon, practice the habit of pausing and considering whether you really need to print the document. You might decide that it would be just as effective and more eco-friendly if you insert comments electronically, printed a single page or a range of pages, read it online, or filed it electronically.

### **Advocate for *good enough* is good enough for routine documents**

Go easy on yourself and your colleagues. If the document is a routine document for in-house use only, accept neat, minor corrections made in pen rather than expect a perfect copy.

### **Share rather than distribute documents**

Use routing slips to share a single print document among many people. If appropriate, print a limited number of documents and ask meeting attendees to share. At the very least, figure out how many people will attend the meeting and print just what is needed and not twenty extras just to be safe. Or, skip print handouts altogether and use a digital projector or place the information on a common server.

### **Follow "once is not enough" advice**

Save one-sided documents you no longer need and print draft quality materials on the other unused side. Most desktop printers handle slightly used paper just fine. Create scratch pads out of used one-sided documents as well. However, send directly to the shredder any confidential or proprietary documents that have outlived their usefulness. When you can't reuse paper any longer, recycle it. Make it easy for yourself: place a recycle box right next to your desk. If your company doesn't yet recycle office paper, put that near the top of your Go-Green activist agenda.

### **Print double-sided documents, when appropriate**

If it is appropriate given your readers' needs, opt for double-sided printing. Most office-quality copiers can now print documents on both sides almost as quick as single-sided printing.



## **Going Green During the Document-Design Phase**

Some of the choices you make during the design phase of a document will impact the size of its ecological footprint. Look at the design phase as an opportunity to educate your clients and colleagues about design choices that can damage our environment. Let your understanding of the rhetorical situation and your concern for our planet guide your design decisions. When designing a printed document, consider advocating for the following five eco-friendly design features.

### **Smaller type**

The larger your type, the more pages it will take to present your content. If your audience can handle smaller type, consider something smaller than the default 12-point type. Saving a single page doesn't seem like much, until you print 100,000 copies.

### **Smaller margins**

A popular word processor defaults to 1.25 inch right/left margins and 1.00 inch top/bottom margins. Most of us learned in first-year English to set our margins at 1 inch all the way around. However, some documents might not need that much white space in the margins [38]. Consider .75 inch margins for routine documents printed on desktop printers.

### **Less color**

Neon- and fluorescent-colored paper might be highly visible but such paper contains toxic chemicals and is often not capable of being recycled. Likewise, a four-color document might require more processing and ink (and, thus, create a larger ecological footprint) than a document with limited colors. If you have a reason for using color do so, but don't use color ink and paper just because they are available.

### **Lightweight cover stock or none at all**

If the document is going to be lightly used for a limited time, consider omitting the heavier paper cover. A simple staple in the upper left-hand corner might be all you need.

### **No "This page left intentionally blank" pages**

When appropriate, use all available pages. For example, start new chapters on the next available page. If your style guide dictates that each new section should start

on a new page, consider changing your style guide to reflect eco-friendly design practices.

## **Going Green at the Printers**

When you can no longer produce a document using your desktop printer and must turn to a commercial printer, it usually means you are printing a large quantity. Your unit price goes down as your quantity goes up; however, so does the damage you potentially can inflict on our environment. When working with a commercial printer, consider the following five strategies.

### **Take your business to an environmentally responsible printer**

Printing can generate a variety of waste and toxic by-products, from solvents used to clean printing presses to photochemical solutions and films [17]. A lot of waste paper is also generated during a press run. Although many companies have discovered that reducing their ecological footprint saves them money [39-40], not all print companies have an equal level of commitment to protecting our environment. Ask a representative from your print vendor what is being done to reduce or eliminate hazardous chemicals and toxic air emissions [41]. Also, ask him or her about the company's paper-recycling program. If the company cannot give you informed answers to your questions, you should consider taking your business to a different vendor.

### **Choose paper with recycled content**

Look for paper with a high percentage of Post-Consumer Waste (PCW). PCW paper has been used and then recycled rather than dumped in a landfill. When choosing your paper, consider its percentage of recycled content along with the traditional characteristics such as color, finish, weight, opacity, brightness, strength, and thickness. With industrialized nations consuming 87 percent of the world's printing and writing papers [42], every company could do a better job of reducing its reliance on 100-percent virgin paper.

### **Consider alternative papers**

One of the leading causes of deforestation is our thirst for wood pulp for paper [43]. Paper made from eco-friendly sources such as kenaf, hemp, wheat straw, banana stalk, organic cotton, and sugarcane is now commercially available [44]. In fact, companies such as Apple, Sony, Warner Bros., J.C. Penny, The Gap, and Esprit International use kenaf paper [45]. Ask your printer what tree-free papers are available for your print project.

## Select chlorine-free paper

Bleaching by chlorine and chlorine compounds is what gives paper its white color. The bleaching process also creates chemicals known to be carcinogenic and mutagenic—chemicals you do not want released into our environment. Consequently, choose paper that is labeled Totally Chlorine Free (TCF), if you are using new paper. Choose Process Chlorine Free (PCF), if you are using recycled paper. Avoid paper described as Elementally Chlorine Free (ECF) because the paper was still bleached using chlorine (just not as much).

## Use vegetable-based inks.

Because of the Vegetable Ink Printing Act passed in 1994, print jobs for the government already require the use of vegetable-based inks. A few centuries ago, printers used mostly vegetable-based inks. In the 1960s, better-performing and cheaper petroleum-based inks replaced vegetable inks on most printing processes. However, vegetable-based inks, especially soy ink, now outperform petroleum-based inks [46-48], cause less damage to our planet, represent a renewable resource, and are increasingly price competitive. Ask your printer what vegetable-based inks are available for your printing needs.

## Conclusion

The world may seem less radical than it did when IEEE-PCS was just beginning 50 years ago but thanks in a large part to the Internet, people, including professional communicators, are more aware of what is happening in and to the world. As we look forward to the next 50 years of the Professional Communication Society, we need to include our planet's health when we make our business decisions. The Great Law of the Iroquois Confederacy includes the following statement: "In our every deliberation, we consider the impact of our decisions on the next seven generations" [49]. By positioning our profession as a steward of our environment, we can not only help improve the health of our planet but also ensure our livelihood as professional communicators for the next seven generations.

## References

[1] Leadership in Energy and Environmental Design. U.S. Green Building Council. [Online]. Available: <http://www.usgbc.org/DisplayPage.aspx?CategoryID=19>

[2] Lockwood, C. As Green as the Grass Outside. *Barron's*. 25 December, 1-3, 2006. [Online]. Available: [http://charleslockwood.com/pdf/barrons\\_article.pdf](http://charleslockwood.com/pdf/barrons_article.pdf)

[3] Serra, D. More Companies Offering Social(k) as Part of Traditional 401(k). *Idaho Statesman*. 31 December: P1, P2, 2006.

[4] Chouinard, Y. *Let My People Go Surfing: The Education of a Reluctant Businessman*. Penguin, New York, NY, 2006.

[5] Tilin, A. And Nau for Something Completely Different. *Outside*. February: 44-49, 2007.

[6] McKay, B. When Buying Organic Makes Sense—and When It Doesn't. *Wall Street Journal*. 16 January: D1, D2, 2007.

[7] Kovarik, W. Environmental History Timeline. [Online]. Available: <http://www.runet.edu/~wkovarik/envhist/>

[8] The Consumers Union Guide to Environmental Labels. Consumers Union. [Online]. Available: <http://www.eco-labels.org/home.cfm>

[9] Kachura, P. It's Good to be Green. Smart Reply, 2007. [Online]. Available: [http://forestethics.org/downloads/SR\\_GreenMarketingv13.pdf](http://forestethics.org/downloads/SR_GreenMarketingv13.pdf)

[10] Crawford, A. Go for the Green. *Vegetarian Times*. January: 84-87, 2006.

[11] Erickson, G., and L. Lorentzen. *Raising the Bar: Integrity and Passion in Life and Business*. Jossey-Bass, San Francisco, CA, 2006.

[12] Paper Sourcing. REI. [Online]. Available: <http://www.rei.com/aboutrei/paper.html>

[13] Manning, H. *REI: 50 Years of Climbing Together*. Recreational Equipment, Inc, Seattle, WA, 1988.

[14] Under Siege by Catalogs, Santa Pleads for Help. ForestEthics, 2006.[Online]. Available: [http://forestethics.org/downloads/santaslist\\_final.pdf](http://forestethics.org/downloads/santaslist_final.pdf)

[15] Gunther, M. Retailers Clean Up Their Paper Trails. *Fortune*. 2006. [Online]. Available: [http://money.cnn.com/2006/12/13/magazines/fortune/pluggedin\\_gunthercatalogs.fortune/index.htm](http://money.cnn.com/2006/12/13/magazines/fortune/pluggedin_gunthercatalogs.fortune/index.htm)

[16] Paper consumption statistics. New Jersey Higher Education Partnership for Sustainability. [Online]. Available: <http://www.njheps.org/drewpp.ppt>

[17] Fact Sheet: Waste Reduction in the Commercial Printing Industry. Virginia Department of Waste Management, 1995. [Online]. Available: <http://es.epa.gov/techinfo/facts/vdwm/va-fs17.html>

[18] Copy Paper: Hidden Costs, Real Opportunities. Citigroup and Environmental Defense. [Online]. Available: <http://www>



.environmentaldefense.org/documents/2860\_Citigroup\_CopyPaper.pdf

[19] Going Paperless with Technology. United States Environmental Protection Agency, 1996. [Online]. Available: <http://www.epa.gov/wastewise/pubs/wwupda5.pdf>

[20] Rew, L. J. *Editing for Writers*. Prentice-Hall, Inc., Upper Saddle River, NJ, 1999.

[21] Gaal, A., D. Gillette, N. Sadusky-Krantz, and S. Steward. The Politics, Problems, and Practicalities of Serving as Effective User Advocate in an Obstinate Organization. *Proceedings of 2000 Joint IEEE International and 18th Annual Conference on Computer Documentation*, 111-125, 2000.

[22] Code of Professional Practice. Institute of Scientific and Technical Communicators, 2006. [Online]. Available: <http://www.istc.org.uk/Downloads/ISTCCodeofProfessionalPractice.pdf>

[23] ForestEthics. [Online]. Available: <http://forestethics.org>

[24] Environmental Defense. [Online]. Available: <http://www.environmentaldefense.org/home.cfm>

[25] Forest Stewardship Council. [Online]. Available: <http://www.fscus.org>

[26] Greenguardian. [Online]. Available: <http://greenguardian.com/>

[27] Government Purchasing Project. [Online]. Available: <http://www.gpp.org/index.html>

[28] New Leaf Paper. [Online]. Available: <http://www.newleafpaper.com/index.html>

[29] Environmental Defense Paper Calculator. Environmental Defense. [Online]. Available: <http://www.papercalculator.org>

[30] Markel, M. *Technical Communication*. Bedford/St. Martins, Boston, MA, 2007.

[31] Institute for Local Self-Reliance. *Biochemicals for the Printing Industry: The Carbohydrate Economy*. Institute for Local Self-Reliance, Washington, D.C., 1997.

[32] The World Scientists' Warning to Humanity. Union of Concerned Scientists, 1992. [Online]. Available: <http://www.ucsusa.org/ucs/about/1992-world-scientists-warning-to-humanity.html?log-event=sp2f-view-item&mid=31402985>

[33] Educational Signs to Encourage Double-sided Printing and Copying. [Online]. Available: <http://www.environmentaldefense.org/article.cfm?ContentID=3542>

[34] Gibbs, M. Is Going Green Good for Business? PC World, 2007. [Online]. Available: <http://www.pcworld.com/article/id,131775-c,workplace/article.html>

[35] Burger King, Under Pressure, Will Serve Cage-Free Eggs & Pork. Organic Consumers Association. 2007. [Online]. Available: [http://www.organicconsumers.org/articles/article\\_4628.cfm](http://www.organicconsumers.org/articles/article_4628.cfm)

[36] PepsiCo Drops Animal Tests. PETA E-News. 11 May 2007.

[37] Hamilton, G. Victoria's Secret Mends Fences with Eco-activists. ForestEthics. 2007. [Online]. Available: <http://forestethics.org/article.php?id=1803>

[38] Pearce, J., and C. Uhl. Getting it Done: Effective Sustainable Policy Implementation at the University Level. *Planning for Higher Education* 31 (3): 53-61, 2003.

[39] Small Business Waste Reduction Guide. University of Wisconsin-Extension Cooperative Extension. Center for Environment and Energy & Small Business Development Center. 1997. [Online]. Available: [http://www.uwex.edu/ces/ag/sus/sbdc/pdf/ocdt/S4\\_7\\_1.pdf](http://www.uwex.edu/ces/ag/sus/sbdc/pdf/ocdt/S4_7_1.pdf)

[40] Jones, G. Litho Printer Reduces Ink Waste with Innovative Sheetfed Ink Pumping System. Printers' National Environmental Assistance Center. 2004. [Online]. Available: <http://www.pneac.org/sheets/pdfs/johnrobertsprintingcasestudy.pdf>

[41] How to Press Printers to Reduce Waste, Emissions, and Costs. *The Green Business Letter*. [Online]. Available: [http://www.greenbiz.com/toolbox/howto\\_third.cfm?LinkAdvID=4204](http://www.greenbiz.com/toolbox/howto_third.cfm?LinkAdvID=4204)

[42] Toepfer, K. Keynote address. United Nations Environment Programme's 7th International High Level Seminar on Cleaner Production. Prague, Czech Republic, 2002.

[43] Sarantis, H. *Business guide to paper reduction*. ForestEthics, 2002. [Online]. Available: <http://forestethics.org/downloads/BusinessGuidetoPprRdctionL.pdf>

[44] Tilford, D. The Paper Chase. *Enough!* No. 5. [Online]. Available: <http://www.newdream.org/newsletter/papchase.php>

[45] Kenaf Paper: A Ecological Alternative. Forest Friendly Paper Campaign. [Online]. Available: <http://www.ecomall.com/greenshopping/kenafx.htm>

[46] Proia, J. 2001. Going Green with Your Marketing Materials. *Design, typography & graphics*. 2001. [Online]. Available: <http://www.graphic-design.com/DTG/Business/greenprint.html>

[47] After 20 Years, Soy Ink Continues to Make an Impression on Users. *Soybean advantage* 7 (4). [Online]. Available: [http://www.unitedsoybean.org/FileDownload.aspx?File=LIB\\_BS\\_TOCJULY2006.HTM](http://www.unitedsoybean.org/FileDownload.aspx?File=LIB_BS_TOCJULY2006.HTM)

[48] EPA Project Summary: Waste Reduction Evaluation of Soy-based Ink at Sheet-fed Offset Printer. United States

Environmental Protection Agency, 1994. [Online]. Available: <http://es.epa.gov/techinfo/specific/proj-sum.html>

[49] Seventh Generation. [Online]. Available: <http://www.seventhgeneration.com/>

## **About the Author**

Roger Munger is an associate professor of technical communication at Boise State University where he teaches courses on green writing, eco-friendly printing processes, and service-learning for the English Department. He's also a vegan and activist for preserving winter wildlands and a quality human-powered snowsports experience on public lands. Contact: [rmunger@boisestate.edu](mailto:rmunger@boisestate.edu).