



**Forest Justice**  
When they thrive, we all thrive.

## **A Project of the National Wildlife Federation Paper and Wood Purchasing Policy Guide**

### **Table of Contents**

- I. Introduction
- II. Understanding Paper Purchasing
- III. Understanding Wood Purchasing
- IV. Step-by-Step Guide
- V. Sample Paper and Wood Purchasing Policy

---

## **Introduction**

Paper and wood consumption worldwide continues to increase yearly. Paper represents about one fifth (1/5) of the world's total wood harvest and two thirds (2/3) of the pulp that goes into paper made at North American paper mills is from virgin forests.

Worldwide, we as a human population, are using roughly 1 million tons of paper per day, or put more clearly, roughly 23 million sheets of paper per day. The United States is the largest consumer of paper, at approximately 90 million tons of paper per year. That averages about 700 pounds of paper per person.

In addition, paper has a devastating impact on carbon emissions. According to the UN Food and Agriculture Organization, deforestation accounts for over 20 percent of annual carbon emissions caused by human activity, with paper production accounting for one fifth of that percentage. Hence, it's time we start getting smarter about how we source our paper, how we use paper, and what we do with paper when we are finished with it.

Saving forests isn't just about the trees. Over 1.2 billion Indigenous and Forest Peoples depend on forests for their livelihood. Thousands of indigenous people have been displaced or have lost their livelihoods due to the destruction of forests; not to mention habitat loss and loss of biodiversity.

Seeking institutional commitments to smart, sustainable paper and wood purchasing is one way that we can have a positive impact in reducing the destruction of the world's remaining forests. University and college campuses are huge consumers of paper and wood products. In fact, university and college campuses create approximately 3.6 million tons of waste each year (roughly 2% of the U.S. waste stream) (The Green Book). Not only are campuses large consumers of paper and wood products, they also have a responsibility to educate and inform over 20 million students, staff and faculty that are part of the university and college system in the United States. Collectively, these 4,100 campuses have a purchasing power of over \$360 billion per year, which hopefully with the assistance of this toolkit and other sustainability initiatives will transform that power into purchasing green and sustainable products.

## II. UNDERSTANDING PAPER PURCHASING

### The 3 Most Importance Factors in Selecting Paper:

- (1) Post-consumer recycled content
- (2) Bleaching classification, and
- (3) Source of the original raw material.

#### (1) Buy paper with the highest post-consumer recycled waste content available.

Post-Consumer vs. Pre- Recycled Content: It is important to understand the difference between post-consumer paper and pre-recycled content paper. **Post-consumer is the most important number to identify!** The post-consumer number identifies the percentage of paper that was extracted from the waste stream and turned into pulp for new paper. Using a high percentage post-consumer recycled content (i.e. 100%, 50% or 30%) decreases deforestation, pollution and waste because it is re-using paper that would have gone into landfills.

Pre-consumer or pre-recycled denotes the percentage of paper that is recovered during the manufacturing process. This includes wood scraps and paper trimmings, which are common during the production process. Total recycled paper content includes both, pre and post consumer paper fibers in the production of the new paper. Nowadays, it is very common to find paper that has 100% post-consumer waste, and it can be found for the same price, if not cheaper from paper suppliers.

#### (2) Buy Process-Chlorine Free or Totally-Chlorine Free Paper

Traditional “bleaching” of paper can have harmful effects on the environment. Some effects include: water pollution, the release of dioxins and furans as by-products (dioxins have been found to cause endocrine, reproductive, nervous, and immune system damage) and air pollution. Papers can be categorized by their “bleaching classification.”

There are several chlorine bleaching classifications:

- Elemental chlorine-free
- Processed chlorine-free
- Totally chlorine-free.

**Elemental Chlorine-Free:** Bleaching with elemental chlorine was once the industry’s preferred method. Because of dioxin concerns, most paper producers have switched to bleaching with a chlorine derivative, such as chlorine dioxide, in a process known as “elemental chlorine-free” (ECF) bleaching. Although ECF bleaching reduces some dioxins by up to 90 percent over traditional chlorine bleaching, it does not eliminate them.

**Processed Chlorine-Free (PCF):** To further reduce dioxin emissions, some paper manufacturers and purchasers are switching to “processed chlorine-free” (PCF) methods in which new recycled-content paper is bleached without the use of any chlorine or chlorine derivatives. While some dioxin might be released during this process because the recycled papers were originally bleached with chlorine or chlorine derivatives, no additional dioxin is produced with the PCF method. PCF papers with high post-consumer recycled content (30 percent or greater) are generally the most preferable because they are affordable,



contain recycled content, and are, for all practical purposes, chlorine-free.

**Totally Chlorine-free (TCF):** TCF papers can also be made, and they produce no dioxins or chlorinated toxic pollutants during the manufacturing phase because chlorine is not used in any part of the production process. Unfortunately, TCF papers containing post-consumer recycled content are unavailable domestically because the available recycled-content paper pulp was most likely originally bleached with chlorine. As a result, most domestic TCF papers are made from virgin wood although some relatively expensive TCF tree-free papers are commercially available.

**(3) Buy paper products that were produced from properly managed forests or from alternative “tree-free” fibers.**

Certified Forests are becoming more and more prevalent in today’s world. There are currently four different forest certification systems in North America. **The Forest Stewardship Council (FSC)** and the **Program for the Endorsement of Forest Certification Schemes (PEFC)** operate on an international scale and the **Sustainable Forest Initiative (SFI)** and the **Canadian Standards Association (CSA)** operate nationally.

The FSC ([www.fscus.org](http://www.fscus.org)) is the most recognized and has the most stringent policies in place for forest management practices. In fact, the FSC is supported by more than 14 nationally recognized environmental organizations, including the National Wildlife Federation, The Nature Conservancy, and the World Wildlife Fund. Also, major corporations, such as Lowes, Home Depot, and Kinko’s, endorse the FSC and carry FSC certified products at their store.

In addition to trees, there are several alternative fibers on the market for producing paper, such as kenaf, hemp, agricultural residual materials (cereal straws, cotton linters, banana peels, coconut shells, etc.), denim fabric and even old paper money. Many of these “agrifibers” yield more pulp-per-acre than forests or tree farms, and require fewer pesticides and herbicides. Fewer chemicals and less time and energy are needed to pulp agricultural fibers because they contain less lignin (a glue-like substance that makes plants and trees stand erect). Due to their inherently lighter color, agrifibers can be effectively brightened using totally-chlorine-free (TCF) bleaching processes, thus eliminating the production of highly toxic chlorine byproducts (such as dioxin). Although their prices are often higher, purchasers can keep prices competitive by substituting a lighter grade of tree-free paper. Some find that this actually saves money when compared with more traditional choices.



# III. UNDERSTANDING WOOD PURCHASING

The use of wood on college and university campuses is often overlooked. Yet, as campuses continue to experience growth, the use of wood and wood-based products continues to increase. Wood is used for the construction of new buildings, furniture in dorm rooms, offices, and dining halls/cafeterias, flooring, and heating systems, to name a few.

## The 3 Most Important Factors in Selecting Wood

### (1) Forest Certification

### (2) Buy local

### (3) Buy low or no carbon impact product

#### (1) Use wood that originated from a Forest Certified forest.

As mentioned with paper purchasing, buying wood that was Forest Stewardship Council (FSC) certified is the best way you can ensure you are purchasing wood from a properly managed forest.

FSC certified forests ensure the following:

- Require management for natural forest attributes and ecosystem function.
- Prohibit replacement of natural forests by ecologically-barren tree plantations, and require portions of existing plantations to be managed more naturally.
- Require protection measures for rare old growth in certified forests, and require protection of all other high conservation value forests.
- Require on-the-ground protection for all imperiled, threatened, and endangered species.
- Encourage forest practices that reduce the need for routine, intensive chemical use, and ban the most toxic chemicals.
- Prohibit replacement of forests by sprawl and other non-forest land uses.
- Prohibit logging levels that exceed forest growth levels.
- Prohibit use of genetically modified trees and other genetically modified organisms (GMOs).
- Require verification of compliance with all applicable laws and policies for forestry, land use, and resource protection.
- Address numerous other specific forest management considerations.<sup>1</sup>

In addition, FSC has strong socially-responsible values, including protecting indigenous people's rights by reinvesting in communities, requires management complies with international labor laws

#### (2) Buy locally made FSC- certified products

Buying local products from FSC certified wood ensures that jobs are being made available for many rural or small communities. NWF, Mark Lorenzo believes that for every \$1 million spent on FSC- certified wood products creates 20 direct and indirect jobs. Also, buying locally produced wood products decreases carbon emissions because it decreases transportation emissions. Depending on where you are located in the United States, it is possible to locate FSC certified forest products. Check out the [www.fscus.org](http://www.fscus.org) website for more details.

#### (3) Buy low- or no-carbon impact products.

Although this is slowly making waves in the wood producing industry, and will soon require product verification, buying low- or no carbon products will further reduce emissions into the atmosphere. For now, wood products that are FSC-certified will assure that more wood (biomass) is growing than is being harvested. This keeps the forest functioning as a carbon sink (sucking up carbon emissions). Also local production reduces carbon emission associated with trucking products. Finally, when FSC-wood is substituted for metal or plastic in a project, it immediately reduces the carbon footprint of that project, since metal is very energy-intensive to produce, and plastic is made from oil.



# STEP-BY-STEP GUIDE TO PASSING SUSTAINABLE PAPER AND WOOD POLICIES

**Step 1: Form a Committee:** Develop a committee that will be the main contact on paper and wood consumption. This committee should be made up of a mix of students, faculty and staff. This committee should conduct a basic audit of the paper and wood practices on campus.

**Step 2: Determine Your Baseline:** Before you begin tackling paper and wood purchasing policies on your campus, we suggest that you do a basic audit. It is important to know the following:

1. Does your school have any suggested paper and wood guidelines already in place?
  - Can these “guidelines” be turned into a strong institutional policy?
2. How are paper and wood products procured?
  - It is important to talk with purchasing managers and departments to understand how paper is used differently on campus and where possibly changes can be made
3. What types of paper and wood products are you currently being used?
  - Campuses use many different types of paper (uncoated, coated, cardstock, etc).
  - Where is wood being used on campus? A quick tip: Look around your campus. Is it in an expansion mode? If a building is being built, most likely wood is being used.
4. Where are paper and wood products being sourced?
  - Find out if the companies that paper and wood are sourced from offer environmentally friendly options.
5. How much paper is being consumed daily/weekly/monthly/yearly?
  - The #'s audit is crucial to figuring out how much waste your campus is producing in the form of paper and wood.
6. How is your paper and wood waste currently being disposed of?
  - If your school already has a recycling program, how effective has it been? Is wood waste salvaged or discarded?

**Step 3: Determining Your Goals:** Once you have a basic understanding of where your paper and wood is coming from and how much you use, it is important to look what your paper reducing and purchasing goals are. Focus on developing goals that have short, medium, and long-term results? Many goals might take longer than a year, and it's important to have “small wins” throughout the process.

For example: Can your school reduce consumption by 25%? Or, what is the price differentials of purchasing FSC certified 100% post consumer paper vs. purchasing FSC certified 30% post-consumer paper?

**Step 4: Draft Your Policy:** Develop wood and paper purchasing policy drafts (see examples below)

**Step 5: Develop a Base of Support:**

- Hold awareness-building events in visible parts of campus
- Publish letters to the editor in your campus paper
- Inform other active student groups on campus, ask for their input and think of ways that they can get involved.
- Talk with the campus print shop and purchasing departments, ask them about what they've done before on sustainability, and let them know about the campaign you're working on. Ask if they have any advice for you and if they will support your campaign.



- Seek support from relevant academic departments such as Environmental Studies, Botany, Forestry, Anthropology, etc.
- Meet with the College President and other critical administration. Ask them if they will support the campaign and if they have any suggestions for how to make it stronger.

**Step 6: Seek Approval:** Be sure to learn the necessary steps in moving a new policy to successful adoption.

- A great place to start is to seek support from the Student Government Association for the policy. This can be a great place to test your arguments and assess what type of questions you'll be asked.
- Is there an Environmental or Sustainability Committee on Campus? Many schools have formed committees of faculty, staff, administration and students that are focused on the sustainability efforts the school is taking. Find out if your school has one and get involved. Endorsement from this committee will strengthen both the content and the base of support for your policy.
- Understand what the next steps are to officially pass a policy through your school's administration and then pursue them!

**Step 7: Begin Implementation:** You've Won! Woo hoo! Now that the policy is in place, we can see real change.

**Step 8: Track and Evaluate Regularly:** Track and evaluate positive impact your school is having on the paper and wood industry.

**Step 9: Publicize Your Victories:** It is important to document all your victories and publicize them on the school website, newspaper and to the wider community. Publishing your victories and demonstrating the reduction of environmental impacts on the university will build confidence in your community's ability to affect change and possibly lead to a snowball effect with other environmental efforts.



# V. Model Paper Purchasing Policy

(Adopted from the Environmental Paper Network, [www.epn.org](http://www.epn.org))

Paper plays a key role in [University name]'s operations. We are concerned about the future of the world's forests and the environmental impacts of paper production. We are therefore committed to purchasing, using, and disposing of paper in ways that protect endangered forests, indigenous communities and their associated biodiversity, reduce pollution, and minimize waste.

By developing a comprehensive paper and wood policy, [University X] is making a commitment to implement and track results of our paper efficiency and procurement strategies by:

- Using Paper Efficiently by reducing consumption of paper and paper products when possible.
- Maximizing Recycled Content by buying products with the highest post-consumer recycled content feasible for each specific need, but no less than the U.S. Environmental Protection Agency (EPA) minimums for federal agencies.
- Choosing Responsibly-Sourced Fiber by purchasing products that originate from sustainably managed forests and are certified by independent, third-party organizations, such as the Forest Stewardship Council.
- Supporting Cleaner Production Practices by selecting products that are processed without chlorine or chlorine compounds and giving preference to suppliers and manufacturers using renewable energy.
- Closing the Loop by implementing and maintaining a recycling system to ensure the raw materials for producing recycled-content paper are readily available.
- Spreading the Word by producing an annual sustainability report and posting information on our paper policy and practices on our website, and promoting responsible paper use in publications as appropriate.

## **Using Paper Efficiently**

Using paper efficiently is a key first step in reducing the environmental impacts associated with paper use. To use paper efficiently, [University name] will:

- Increase paper efficiency by [x amount] by [date], upon which time paper use will be re-evaluated and a new target established. [University name] will develop a method for tracking and documenting results.
- Institute practices that increase paper efficiency, including, but not limited to:
  - o Substituting electronic communications for printing.
  - o Purchasing copiers, printers, and fax machines that can be set to default to double-sided printing.
  - o Reusing products such as file folders, storage boxes, and paper printed on one side.
  - o Reducing the basis weight and trim sizes of printed pieces.
  - o Rethinking design processes to minimize printing and copying waste.
  - o Minimizing unsolicited mail, both sent and received.
  - o Minimizing overruns and maximizing sell-through for published materials.

## **Maximizing Recycled Content**

Purchasing recycled-content paper and paper products has far reaching environmental benefits and will encourage suppliers to increase their capabilities in providing these products. To maximize the recycled content in paper and paper products, [University name] will:

- Purchase and source paper and paper products that contain the highest post-consumer recycled content feasible for each specific need, but no less than the U.S. Environmental Protection Agency (EPA) minimums for federal agencies.
- Set a timeline for increasing the post-consumer content in purchased paper products as quickly as possible to higher percentages.
- Give preference to paper and paper products whose post-consumer recycled content is verified by an independent, third-party organization, such as the Forest Stewardship Council.
- Give preference to paper and paper products that also contain other recovered materials (e.g. pre-consumer recycled content, agricultural residues, etc.) after maximizing post-consumer recycled content.

## **Choosing Responsibly-Sourced Fiber**

[University name] supports responsible forest management practices that protect biodiversity, ecosystem

---

<sup>2</sup> For more information on federal minimum recycled content standards, see the Comprehensive Procurement Guidelines and Recovered Materials Advisory Notices at [www.epa.gov/epaoswer/non-hw/procure](http://www.epa.gov/epaoswer/non-hw/procure).



integrity, and long-term benefits to communities. To promote the use of responsibly-sourced fiber in paper and paper products,

[University name] will:

- Verify Supply Origin: Purchase paper and wood listed as FSC certified. If existing suppliers and manufacturers cannot provide these papers, we will verify with them the source of any virgin fiber content in paper and give preference to suppliers and manufacturers that establish a credible “Chain of Custody” tracking system to reliably identify the origin of fiber sources.
- Endangered Forests: Give preference to paper and paper products guaranteed to be free of fiber that threatens endangered forests. We currently support the definition of endangered forests as outlined in the Wye River Coalition’s
- Endangered Forests: High Conservation Value Forests Protection – Guidance for Corporate Commitments and ForestEthics, Greenpeace, Natural Resources Defense Council, and Rainforest Action Network’s Ecological Components of Endangered Forests. We will consult with environmental experts, including EPN member organizations, for assistance in identifying endangered forests and paper and paper products from these forests.
- Forest Conversion to Plantations: Give preference to paper and paper products that can be guaranteed to be free of fibers from the conversion of diverse natural forest ecosystems into plantations. This policy supports the Forest Stewardship Council’s criteria specifying November 1994 as the cut off date for no more conversion of natural forests to plantations. Wood from forests converted to plantations after November 1994 is unacceptable unless the plantations are being restored to natural forests.
- Certified Virgin Fiber: Give preference to paper and paper products with a remaining virgin tree fiber content that is certified by independent, third-party organizations that employ the most environmentally and socially responsible forest management and restoration practices. The Forest Stewardship Council (FSC) is the only acceptable international certification program that meets this guidance.
- Alternative Fibers: Give preference to paper and paper products made from alternative fiber crops (e.g. hemp, kenaf, etc.) if Life Cycle Analysis and other comprehensive and credible analysis indicates that alternative fibers are environmentally and socially preferable to other sources of virgin fiber.
- Genetically Modified Organisms: Buy paper and paper products with fiber content known to be free from genetically modified organisms. This includes transgenically modified trees and plants that have genes of other animals and plants inserted.

### **Supporting Cleaner Production Practices**

[University name] supports minimizing the environmental impacts of paper production. To encourage cleaner production practices, [University name] will:

- Give preference to paper and paper products processed without chlorine or chlorine compounds (i.e. “processed chlorine free” or PCF papers), as long as they also meet recycled content goals. [University name] will set timelines for converting purchases of recycled content paper to PCF.
- Choose paper with the minimum brightness suitable for our printing needs to further minimize environmental impacts from paper bleaching.
- Avoid coatings and bright-colored papers whenever possible.
- Give preference to suppliers and manufacturers that use renewable energy to supply electricity for their facilities, either on-site or through the purchase of renewable energy certificates (RECs).
- Use vegetable-based inks (e.g. soy, linseed, corn, etc.) and inks free of toxic metals whenever possible.

### **Closing the Loop**

[University name] supports measures to secure the availability of environmentally preferable papers, such as

---

<sup>3</sup> For the Environmental Paper Network’s paper hierarchy, see [www.xxx.org/hierarchy](http://www.xxx.org/hierarchy).

<sup>4</sup> The Wye River Coalition’s *Endangered Forests: High Conservation Value Forests Protection – Guidance for Corporate Commitments* is available at [www.environmentalpaper.org/documents/EF-Report.pdf](http://www.environmentalpaper.org/documents/EF-Report.pdf).

<sup>5</sup> ForestEthics, Greenpeace, Natural Resources Defense Council, and Rainforest Action Network’s *Ecological Components of Endangered Forests* is available at [http://forestethics.org/downloads/EFDefinitions\\_April\\_2006\\_2.pdf](http://forestethics.org/downloads/EFDefinitions_April_2006_2.pdf).

<sup>6</sup> For more information on Forest Stewardship Council, see: [www.fscus.org](http://www.fscus.org) and [www.fsc.org](http://www.fsc.org) (FSC U.S. and international web sites), [www.certifiedwood.org](http://www.certifiedwood.org) (certified wood supply database and tracking services), [www.forestworld.com](http://www.forestworld.com) (certified wood supply database and tracking services), and web sites of certifiers specified on FSC web sites.

<sup>7</sup> Renewable energy sources include solar, electric, biomass, wind, geothermal, small hydropower, biodiesel, and fuel cells. For more information on renewable energy sources, see [www.green-e.org/ipp/national\\_standard.html](http://www.green-e.org/ipp/national_standard.html).



maintaining a paper recycling program. To ensure the raw materials for producing recycled-content paper must be readily available, [University name] will:

- Collect and recycle paper that has been used internally as well as paper that is received from outside sources. If a paper recycling program does not currently exist, we will work with our building managers and suppliers to implement such a system.
- Educate co-workers as to what is required of them, including alerting cleaning staff and waste haulers to keep recyclables separate from trash.

### **Spreading the Word**

[University name] recognizes the benefit of promoting environmental awareness with our employees, suppliers, customers, partners, and the public. To publicly promote our commitment to using paper efficiently and purchasing environmentally preferable paper,

[University name] will:

- Publish and distribute to all interested stakeholders an annual sustainability report, which will detail progress in implementing this policy and any other activities related to [University name]'s impact on the environment.
- Post our environmental paper purchasing policy, goals, and achievements on our website.
- Print on documents (e.g. letterhead stationary, envelopes, publications, etc.) an accurate description of the attributes of the environmentally preferable papers used, in order to raise awareness and accountability. Such attributes include, but are not limited to, post-consumer recycled content, bleaching technology (i.e. PCF), and any applicable eco-logos or certifications.
- Encourage suppliers to adopt similar paper policies and implement other environmentally and socially responsible practices.

### **Some Good Examples of Responsible Paper and Wood Purchasing Policies**

Evergreen University: <http://www.evergreen.edu/policies/policy/paperpurchasing>

Hampshire College: [http://www.hampshire.edu/cms\\_PDF/Purchasing\\_Manual\\_FINAL.pdf](http://www.hampshire.edu/cms_PDF/Purchasing_Manual_FINAL.pdf)

University of California, San Diego: <http://adminrecords.ucsd.edu/ppm/docs/530-10.html>

University of Oregon: <http://policies.uoregon.edu/ch4k.html>

University of North Carolina, Chapel Hill:

<http://sustainability.unc.edu/Initiatives/Purchasing/tabid/119/Default.aspx>

---

<sup>i</sup> [http://credibleforestcertification.org/fsc\\_facts/fsc\\_attributes/](http://credibleforestcertification.org/fsc_facts/fsc_attributes/)