



Sustainable Printing Services

March 2015

OCP Sustainable Purchasing Program – Who We Are & What We Do

- Assist DC in meeting its sustainability goals by furthering green procurement of goods and services through:
 - Developing and maintaining environmental specifications for products and services
 - Offering training and online resources for DC Agencies and procurement professionals to assist in green procurement
 - Vendor education and outreach
 - Consulting services for programs seeking to buy green
 - Tracking green purchasing progress and recommending improvements to the program

Learning Objectives

- At the completion of this training, you will be:
 - Introduced to the benefits of procuring sustainable printing services.
 - Introduced to the sustainable specifications for printing services.
 - Informed of differences in cost and performance of products meeting the specifications compared to conventional products
 - Aware of options for including more aggressive environmental attributes not included in the guidance specification.

Scope

The printing services specification addresses the following service categories:

1. Traditional printing services (business cards, brochures, pocket folders, mailers, flyers)
2. Signage printing services (banners, trade show displays, large posters)
3. Specialty printing services (labels, stickers, decals, promotional products, paychecks/ forms requiring security clearance)



Importance

- The District spent \$6.3 million on printing in FY11 – FY13
- Use of Energy Star equipment reduces energy consumption
- Vegetable Ink Printing Act sets vegetable-based content requirements for inks used for federal government printing.
 - Soy-based inks release 20% fewer volatile organic compounds (VOCs).
 - VOCs reduce indoor air quality and can cause a range of adverse health effects from respiratory irritation to cancer.
- Sustainable forestry practices result in lower rates of deforestation.
- Recycled content reduces waste and associated greenhouse gas emissions.



Environmental Requirements

Vegetable-Based Ink

Contractors shall use ink meeting the requirements of the Vegetable Ink Printing Act of 1994, containing at least the following percentages of vegetable oil:

1. News ink, 40%
2. Sheet-fed ink, 20%
3. Forms ink, 20%
4. Heat-set ink, 10%

Equipment



Contractors' printing facilities shall use ENERGY STAR-certified printing equipment for all types of equipment where ENERGY STAR-certified products are available.

Additionally, contractors shall use ENERGY STAR settings as the default for all ENERGY STAR equipment.

Environmental Requirements (cont.)

Printing on Paper and Paper-Based Products

1. For printing on uncoated paper, contractors shall use paper that contains at least 30% postconsumer recycled content (PCRC) and that is certified by the Forest Stewardship Council (FSC).



Environmental Requirements (cont.)

Printing on Paper and Paper-Based Products (cont.)

- For printing on materials other than uncoated paper, contractors shall use materials that meet the U.S. Environmental Protection Agency's Comprehensive Procurement Guidelines for PCRC, as listed below.

Product	Recycled Content
Reprographic Paper, Offset Paper, Forms Bond, Wove Envelope Paper, Cotton Fiber Paper, Text & Cover Paper, File Folders	30% PCRC
Kraft Envelope Paper, Supercalendered, Machine Finish Groundwood, Papeteries, Check Safety Paper, Coated Printing Paper	10% PCRC
Bristols: Cards (Index, Postal, and Other, Including Index Sheets), Tags & Tickets	20% PCRC

Post-Consumer Recycled Content (PCRC) Background

- Postconsumer recycled content (PCRC) reflects the proportion of a product recycled from consumer materials that otherwise would have been disposed.
 - PCRC is often referred to as postconsumer waste (PCW)
- Note that the recycled content logo is not required
- Paper specification for uncoated paper for printing services matches DC's paper specification.
- All recommended PCRC levels with EPA's Comprehensive Procurement Guidelines and regularly used by printers and specified for federal procurements.



Forest Stewardship Council (FSC) Certification Background

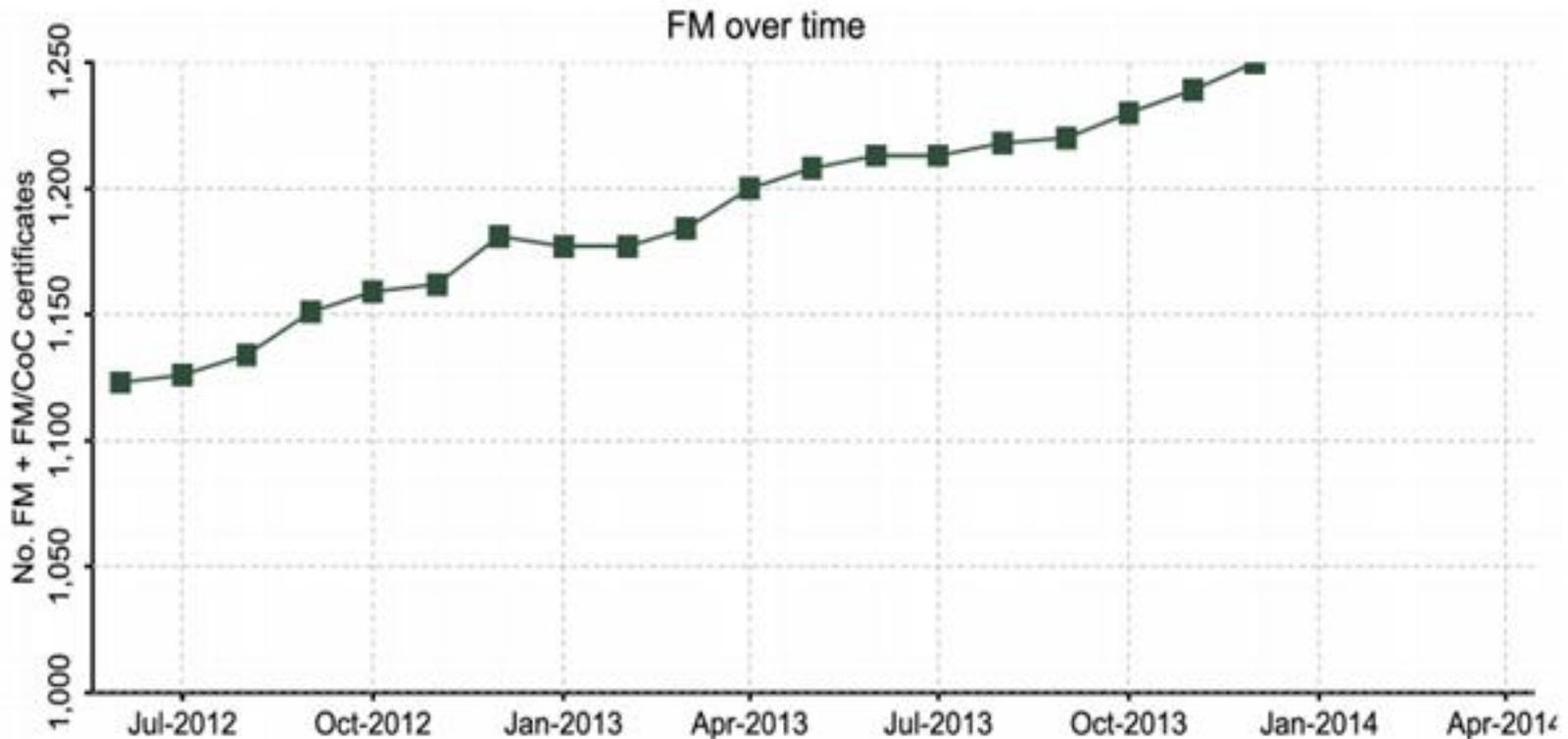
- To be certified by FSC, products must meet both the Forest Management and Chain of Custody standards:
 - Forest Management certification requires that forest managers meet FSC's principles and criteria, including promoting biodiversity, protecting indigenous peoples' rights, and eliminating toxic chemical use
 - All companies in the supply chain must hold Chain of Custody certification. Chain of Custody certification ensures that the companies retain and document the product's FSC-certified content throughout processing, manufacturing, and distribution
- Printing services companies can verify the paper they are using is FSC certified by the presence of the FSC logo on the package. A list of paper products that are FSC certified is available here: <https://us.fsc.org/paper-printing.212.htm>
- While the specification requires use of FSC-certified paper, it does not require printers themselves to have Chain of Custody certification.



Cost, Performance, and Availability

- FSC-certified, 30% PCRC office paper performs well and is widely available in the marketplace.

FSC forest management certificate growth since 2012 (FM and FM/CoC)



Cost, Performance, and Availability

- According to local printing services and paper supply companies interviewed in 2014
 - 30% PCRC tends to be ~5% more than non-recycled paper; however prices fluctuate based on the job and the market.
 - Price premiums for paper may increase significantly when the percent post-consumer recycled content is 50% PCRC or more.
 - FSC certified paper is cost-competitive with conventional paper according to leading local vendors.
- Vegetable-based ink in the proportions used in the spec is **standard** in the industry
- Energy Star equipment is **standard** for commercial printing equipment

Beyond the Specification

- Printers with FSC Chain-of-Custody Certification
 - Certified printers in the District include Alpha Graphics, Automated Graphic Imaging, and Select Printing & Copying
 - GPO and other local printers can contract with FSC-certified printers in other states.
- Other options to reduce resource use
 - Printing on demand: reduces waste by printing only the quantities needed, avoiding excess inventory
 - Double-sided printing
 - Designing materials to conserve space and ink



Image courtesy of www.dreamstime.com

Beyond the Specification

- Recycled Content
 - Look for >30% PCRC
 - DDOE uses 50% PCRC
- Chlorine Free Bleaching
 - Bleaching process can result in the formation of harmful chemicals such as dioxins and furans, which are known to cause cancer in humans
 - **Most Preferred Option:** Process Chlorine Free (PCF)
 - No chlorine or chlorine-containing compounds used in the bleaching process for *recycled* paper
 - Generally available in paper with 50% to 100% PCRC (price premium)



Image courtesy of www.dreamstime.com

Beyond the Specification

- Ecologo or Green Seal paper - must meet specifications
 - 30% PCRC
 - FSC certification
- Wood-free paper alternatives
 - Agricultural residues (e.g., sugarcane husk)
 - Fiber crops (e.g., hemp, kenaf, jute, flax, etc.)
 - Textile and cordage wastes (e.g., cotton, linen, rope)
 - Wild plants (e.g., bamboo, sisal)
 - Often more expensive than recycled paper
 - Rainforest Alliance is leading the development of an [Alternative Natural Fiber Standard](#) using ISEAL guidelines for standard development. Check status and review draft standard [here](#).



Image courtesy of www.dreamstime.com

Beyond the Specification

- Banners and posters: use PVC-free material
 - PVC is made from vinyl chloride and a variety of additives that are included on California's Proposition 65 List of Chemicals Known to Cause Cancer or Reproductive Toxicity. The additives can be released when the product is folded or bent.
 - Alternative, PVC-free materials to consider using include cardboard, fiber board, falconboard, canvas, high-density polyethylene (HDPE), and Tyvek.



Image courtesy of www.dreamstime.com

Benefits

- **Environmental benefits** of recycled-content paper can be calculated with the Environmental Paper Network's Paper Calculator, available at <http://c.environmentalpaper.org/home>