# Green Office Practices Guide

## National Park Service - Pacific West Region

| Activity | Green Practice | References |
|---|---|---|
| **Reducing Paper Use in Correspondence Procedures** | | |
| Sending Messages/Mail | Eliminate cover sheets for faxes - Use a rubber stamp especially made for fax transmittal or note size covers. |  |
| | Use voice mail for short messages. | |
| | Send memos via email without a hard copy to follow. | |
| | Eliminate pictures and excess graphics on fax forms as they are wasteful in ink use and paper space. | |
| | Eliminate pictures and graphics from email so that if they are printed, less ink is used. | Green Seal's *Choose Green* Report on Copy Paper |
| Reuse | Reuse single-sided paper for notepads or for draft copies. | |
| | Reuse envelopes if possible or use rerouting envelopes for internal information. |  |
| Receiving Messages/Mail | Avoid the temptation to print emails that are not necessary in hard copy. If you must save them, use your computer to file. | |
| | Remove yourself or your office from mailing lists and cancel subscriptions to periodicals, journals, etc. that are no longer useful to staff. | |
| | Subscribe to online versions of newsletters and other publications, when available. | |
| Documents/Forms | Make reports and data available online. | |
| | If feasible, make brief comments or responses to minor points in a document by writing directly on it instead of using a sticky note or writing a memo. | |
| | Revise documents to reduce length. Use smaller fonts, smaller margins, and single spacing. You can even reduce your image to fit two pages on one page on your printer or copier. | |
| | Proofread documents on the computer before printing. |  |
| | Avoid making extra copies. Make extras later if you need them. | |
| | Minimize the use of colored papers. They can be a recycling contaminant and contain dyes (particularly bright colors like yellow). Alternative attention grabbers include using colored markers across the top of the first page. | |
| | Consolidate and reduce the size of office forms. Forms should be available in electronic form. | Government Paperwork Elimination Act |
| | Avoid using blue envelopes except for confidential materials. |  |
| | Circulate or post memos and publications through the office rather than making individual copies for everyone. | |
| | Print double-sided copies - always. | |
| **Purchasing Copy Paper** | | |
| Recycled Content | Buy paper with at least 30% recycled content (mandatory). | www.federalsustainability.org |
| | Buy paper with at least 60% post-consumer content. | See Appendix A for Paper Purchasing |

| Activity | Green Practice | References | |
|---|---|---|---|
| Chlorine Free | Buy processed chlorine-free (PCF) paper. | www.chlorinefreeproducts.org | |
| Weight | Buy lower basis-weight paper. (20lb txt rather than 24lb, etc.) | | |
| Alternative Fibers | Consider purchasing paper made with alternative, non-wood fibers (such as kenaf). | www.conservatree.com | Fort Vancouver uses Kenaf paper |
| **Purchasing Office Supplies** | | | |
| Before Purchasing Ask: | Do we already have this product in stock? Keep office supply storage areas organized and inventoried in order to reduce unnecessary purchasing. | For more purchasing resources, see Appendix 11.1 in "Environmental Purchasing in the NPS - A How-to Guide" | |
| | Why is this product needed and are there ways to eliminate it? | | |
| | Can I reuse something else we already have instead of buying a new product? | | |
| | What kind of packaging will this new product come with and is it recyclable? | | |
| | Is this item durable, non-toxic, or made with recycled content? | | |
| Purchase: | Recycled-content office products listed on EPA's CPG list such as binders, folders, clipboards, presentation folders, desktop accessories, etc. | See Appendix B for CPG Items | |
| | | www.epa.gov/opptintr/epp | www.epa.gov/cpg |
| | Easy-to-recycle products. | | |
| | Remanufactured or recycled computer disks. | www.greendisk.com | |
| | Green copier/printing paper (see Purchasing Paper above). | EPA/FSN initiative | |
| | Remanufactured or recycled toner cartridges. Choose a vendor with a take-back program to recycle used cartridges. | See Appendix C for Toner Cartridges | |
| | | www.unicor.gov | |
| | Rechargeable batteries. | Green Office Supplies: | |
| | Solar-powered calculators. | www.gsaadvantage.gov | |
| | Sturdy, durable staplers, scissors, file holders, bookends. | www.jwod.com | |
| | Narrow-ruled notebooks and notepads. | www.treeco.com | |
| | Colored pencils, crayons, or colored wax (instead of solvent-based markers). | www.greenearthofficesupply.com | |
| | Dry-erase calendars. | www.futuresolutionsinc.com | |
| | Refurbished or remanufactured furniture. | www.buygreen.com | |
| | Reusable interoffice routing envelopes. | www.ecomall.com | |
| | Reusable mailbags and boxes. | | |
| | Durable, reusable shipping pallets and crates made from post-consumer recycled materials. | | |
| Recording & Tracking | Establish a tracking system for green purchasing, particularly for Smart Card purchases. | www.doep2.org | DOE's P2 Plan |
| **Purchasing Office Equipment** | | | |
| Copy Machines, Printers, Faxes, etc. | Write specifications when purchasing equipment to meet energy standards, contain less toxic material, and consider end-of-life disposal. | www.newdream.org/procure/products/computers.html | |
| | Buy properly sized Energy Star copiers. | www.energystar.gov | |
| | Purchase printers with double-sided capabilities. | See Appendix D for Purchasing Copiers | |
| | Minimize the number of machines in the office - use central copiers, faxes, and printers rather than several individual workstation machines. | | |
| | Use fax modems or at least plain-paper fax machines. | | |
| | Use computers and other equipment with modular features. | | |

| Activity | Green Practice | References |
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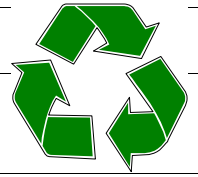
| **Recycling and Reuse** | | |
| Packaging | Use shredded waste paper to replace purchased packaging materials. | http://dnr.metrokc.gov/swd//bizprog/waste_pre/packaging.htm |
| | Reuse package "cushioning" (peanuts, bubble wrap, etc.). | |
| | Most Mailboxes, Etc. will take peanut donations for reuse and some take styrofoam from electronics packaging. | www.mbe.com |
| | Reuse boxes, envelopes, and poster tubes. Recycle what can't be reused. |  |
| | Request reduced packaging/reusable packaging from suppliers. | |
| | Request cornstarch-based packing fill from suppliers. | |
| | Request that manufacturers take back all packaging. |  |
| Reuse | Donate binders and other supplies to schools and other community groups. | |
| | Reuse envelopes with adhesive labels. | |
| | Share electronic pencil sharpeners and other items. | |
| Recycling | Recycle aluminum, glass, plastic, tin, white and mixed paper. | |
| | Recycle household and ni-cd batteries. | See Appendix E for Battery Recycling |
| | Recycle CDs, floppy disks, toner cartridges, and fluorescent lighting and ballasts. | See Appendix C for Toner Cartridges<br>www.ecodisk.com |
| | Recycle computers and electronics where available. Donate to schools, charities, or similar organizations as first priority if in working condition. If not, recycle at local transfer stations, landfills with recycling collection, or recycling companies. | See Appendix F for Electronics Recycling<br>www.epa.gov/epr/products/computers.html<br>www.federalsustainability.org<br>www.nps.gov/propertymanagement |
| | Always put recycling and trash cans together for efficiency and consistency. | |
| | Centralize trash and recycling. Remove bins from unnecessary locations to maximize efficiency. |  |
| | Check to see if bright colors and yellow, glossy paper, staples, and envelope "windows" are contaminants in your paper recycling program and eliminate their use if so. | |
| **Printing Publications** | | See Appendix G for Printing Practices |
| Pre-printing/ Specifications | Know your specifications (% recycled content, vegetable-based ink, weight, etc.) before sending a job to be printed. Learn about the printing process to ensure the most efficient and sustainable practice and product. | |
| Purchasing Publication Paper | Buy high recycled content, high post-consumer content, processed chlorine-free paper with the least weight needed. | See Appendix A for Paper Purchasing |
| | Print on your publication the environmental attributes of your paper or printing process. (e.g. "Printed on 100% recycled paper using soy ink") |  |
| | Avoid glossy paper and bright colors as they make recycling less effective. | |
| Types of Printing | Most low-volume ink jet printers use water-based ink while copiers and laser printers use toner, which contains petroleum products. However, copiers and laser printers can be more economical and resource efficient for an office. For small-scale in-house printing, a laser printer or copier may be more environmental. For large print-jobs, water or soy-based inks are preferred. | www.howstuffworks.com/inkjet-printer.htm |
| Inks/Toners | Use soy, water, or vegetable-based inks where available - inquire before printing | www.soyink.com |

| Activity | Green Practice | References |
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| | to ensure the printer has those capabilities. | www.unitedsoybean.org |
| | Use refillable ink cartridges if economical and feasible. | |
| Colors | Minimize the amount of colors used in a printing job. | |
| Double-Sided | Always print double-sided. | |
| Electronic Options | Provide alternatives to printed publications online or on a CD. | |
| **Record Keeping/Central Files** | | |
| Filing/Storing Documents | Have a Records Management Plan in place. Create a plan that will reduce the amount of file duplication. Files should be easily accessible and properly maintained. | See Appendix I for Records Management<br>http://data2.itc.nps.gov/wapc/shortsch.doc |
| | File records efficiently. Keep only what is necessary and recycle or shred according to records management retention schedules. Correct file management saves resources, time, and money. | http://ardor.nara.gov/grs/index.html |
| | Make file management training available so staff members know how to manage their records efficiently. | |
| | Eliminate reading files or set up a file on the net server. If reading files are necessary, set up a schedule for regular disposal. | |
| | Provide the option to submit information or transact with agencies electronically and maintain records electronically when practicable. (Government Paperwork Elimination Act - GPEA) | www.archives.gov/records_management/policy_and_guidance/electronic_signature_technology.html |
| | Store records and reports with retention schedules of ten years or less on CDs or microfiche instead of in paper form. |  |
| Create Less | The fewer documents there are around, the easier they are to find and manage. Create fewer copies, analyze forms and reporting requirements, and consolidate forms or reports when possible. | |
| **Meetings** | | |
| | Use technology like PowerPoint to reduce paper use for handouts. | www.peninsula.wednet.edu/conservation/Recycling/green_meetings.htm |
| | Provide reusable name tags. | |
| | Seek naturally lighted meeting and exhibit spaces. | www.epa.gov/oppt/greenmeetings/ |
| | Use erasable boards instead of paper flip charts when possible. Flipchart paper is available in recycled content. | |
| | Inform visitors at the beginning of meetings about recycling procedures. | |
| **Energy Conservation** | | |
| Machinery/Equipment Standards & Maintenance Plans | Review all maintenance plans. Practice routine cleaning and maintenance on machines to prevent failure and breakdown and ensure quality performance. | www.energyideas.org |
| Copier Machines, Printers, & Fax Machines | Maximize Power-Save options - use energy-saving features that minimize energy use when equipment is not in use but cannot be shut down. Activate the Powersave function on printers. to power down after 15 minutes of inactivity. |  |
| | Turn all photocopiers, printers, and computers off at the end of the day. | |
| | Install timers for after hour and weekend shutdown. | |

| Activity | Green Practice | References |
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| Computers | Use the energy features on computers and other equipment - sleep modes greatly reduce wasted energy. | |
| | Use office energy devices such as master power outlets that shut down all equipment at a desk. | |
| Lighting | Use occupancy sensors wherever applicable. |  |
| | Use T-8 and T-5 fluorescent lighting fixtures or compact fluorescents where appropriate (rather than T-10 or T-12 which contain more mercury). | |
| | Convert exit signs, which run 24 hours a day, seven days a week, to compact fluorescent lamps or Light Emitting Diode (LED) technology. |  |
| | Use minimal lighting - install individual lighting for workstations to make efficient use of lights. Berkeley Lamps use up to 75% less energy than incandescent or halogen lights. | Berkeley Lamps<br>www.lightcorp.com |
| | Maximize natural daylighting through windows with efficient furniture placement, white walls or surfaces, and unblocked windows. Turn off overhead lighting when natural daylight increases. | |
| | Only turn on the necessary amount of overhead lighting for the task. | |
| Heating & Cooling | Install programmable thermostats to eliminate unnecessary HVAC use during hours when building is not in use. | www.eren.doe.gov/EE |
| | Use outside air economizers if available in the HVAC system. | |
| | Use fresh air for cooling and heating when appropriate. When the system is actively running, keep doors and windows closed to maximize efficiency. | |
| Other | Eliminate or minimize the use of individual radios, heaters, holiday lighting, fountains, and other non work-related amenities. | GSA regulation |
| **Reducing Hazardous Waste & Purchasing Non-toxic Office Products** | | |
| | Use nontoxic, biodegradable janitorial products. | NPS/PWR Green Janitorial Products and Practices Guide — Yellowstone NP |
| | Buy nontoxic glues, pastes, glue sticks, and correction fluid. | |
| | Prevent pest infestations so pesticides won't be necessary. Follow good Integrated Pest Management practices such as maintaining clean eating and working spaces, removing food waste regularly, storing food in sealed containers, and inspecting plants for pests before bringing them to the office. |  |
| **Food Functions, Lunch Rooms/Break Rooms, & Lobbies** | | |
| Purchase: | Reusable, washable serviceware. If this isn't possible, buy tree-free or biodegradable disposables over plastic or styrofoam, or buy unbleached paper with high recycled content. | www.earthshell.com<br>www.simplybiodegradable.com |
| | Coffee, tea, etc. in bulk. Consider fair trade, shade grown coffee. | www.fairtradefederation.com |
| | Reusable or unbleached coffee filters. | |
| | Washable tablecloths, napkins, placemats, towels if washing machine is available. | www.chlorinefreeproducts.org |

| Activity | Green Practice | References |
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| | Unbleached paper napkins with recycled content in smaller, thinner thicknesses. | |
| | Unbleached paper towels with high recycled content. | |
| | Large-roll paper towels with smaller sized sheets and lighter weight. | |
| | Use durable mugs; store extras for visitors. |  |
| | Cleaning supplies with concentrated refills. | |
| | Concentrated, phosphate-free, nontoxic dishwasher detergent. | |
| | Airtight, reusable food storage containers (instead of plastic wrap). | |
| | Spun-glass scouring pads (instead of steel wool). | |
| | An Energy Star refrigerator. | www.energystar.gov |
| Avoid Purchasing: | Styrofoam products. | |
| | Straws. |  |
| Other: | Take home coffee grounds and use as a soil amendment. (especially good for roses!) | |
| | Use insulated coffee pots, not hot plates. | |
| | Use microwaves, not ovens. | |
| | Turn off the light bulbs in the front of vending machines - they run 24 hours a day and do not affect the temperature or functions of the machine. | |
| | Install occupancy sensors and temperature sensors in vending machines to cool efficiently. | Vending Mi$ers<br>www.bayviewtech.com |
| | Initiate a vermicomposting system to compost lunchtime food scraps. | www.magicworms.com \| CCSO, CRLA |
| **Training to Reduce Paper & Energy Use** | | |
| Provide Mini Sessions | Hold brown bag lunch sessions. | |
| | Provide training on how to use copier machines efficiently. | |
| | Provide training on how to use the computer for filing to reduce paper use. | |
| | Provide training on how to duplex print. | |
| **Office Attitudes** | | |
| Special Events | Celebrate Earth Day (April 22) and America Recycles Day (Nov 15). Use them to initiate new ideas and generate interest in green practices. | www.earthday.net<br>www.americarecyclesday.org \| earthdaynetwork |
| Commuting | Encourage alternative transportation and carpooling. Offer incentives such as subsidized bus passes, providing secure bike parking, coordinating carpool schedules. |  |
| | Encourage less use of Single Occupancy Vehicles. | |
| | Support flexible work locations. | |
| Employee Recognition | Support employees who practice sustainable behavior with awards, coupons, or other forms of recognition. | |
| Awards | Submit proposals for awards such as OFEE's Closing the Circle Awards, EPA's WasteWise Program, or DOI's Environmental Achievement Award | www.ofee.gov \| www.doi.gov<br>www.epa.gov/wastewise |
| | Give awards made from recycled content. | www.millerpromotions.com \| www.yemmhart.com |

| Activity | Green Practice | References |
|---|---|---|
| **Green Office Resources** | | |
| Energy Star Program | Provides guidance for purchasing energy efficient products and resources for improving workplace energy efficiency. | www.energystar.gov |
| EPA's Comprehensive Procurement Guidelines | Federal procurement requirements for office products such as paper and paper products, trash cans, desktop accessories, trash bags, envelopes, toner cartridges, binders, clipboards, file folders, and other supplies. | www.epa.gov/cpg<br>See Appendix B for CPG Items |
| EPA's Green Office Guides | Environmentally Preferable Purchasing Guides: | |
| | Greening Your Meetings and Conferences | www.epa.gov/oppt/greenmeetings |
| | Greening Your Purchase of Copiers | www.epa.gov/opptintr/epp/copiers.htm |
| | Greening Your Purchase of Electronics | www.epa.gov/opptintr/epp/electronics.htm |
| | Greening Your Purchase of Cleaning Products | www.epa.gov/opptintr/epp/cleaner.htm |
| | Business Guide for Reducing Solid Waste | www.epa.gov/epaoswer/non-hw/muncpl/pubs/red2.pdf |
| | Waste Wise Tip Sheets & Information | www.epa.gov/wastewise/pubs.htm |
| | Buy Recycled Series - Nonpaper Office Products | www.epa.gov/cpg/pdf/nonpap00.pdf |
| | Buy Recycled Series - Paper Products | www.epa.gov/cpg/pdf/paper-00.pdf |
| Green Seal Program | Publishes Choose Green Reports on products including: Carpet, fluorescent lighting, copy paper, cleaners, lawn care equipment, occupancy sensors, paints, paper towels, particleboard and medium-density fiberboard, printing and writing papers, food packaging, and air conditioners. | www.greenseal.org/cgrs/report.htm |
| King County, WA | Waste Reduction Sheets | http://dnr.metrokc.gov/swd |
| | Business Waste Reduction and Recycling Handbook | |
| National Park Service | Pacific West Region's Environmental Purchasing in the NPS - A How-to Guide | To be posted at http://pfmd.nps.gov/HAZMAT |
| | PWR's 100+ Best Management Practices Guide | www.nps.gov/renew/npsbmp.doc |
| | PWR's Green Janitorial Products and Practices Guide | To be posted at http://pfmd.nps.gov/HAZMAT |
| | NPS Correspondence Guidelines | Contact RD_Louwerens@nps.gov |
| Office of the Federal Environmental Executive | Guidance for Implementing Executive Order 13101 | www.ofee.gov |
| WA Department of Ecology | Reducing Waste in Your Business | www.ecy.wa.gov/biblio/90br05.html |
| Other Publications | Source Reduction Procurement Guide – Source Reduction Forum of the National Recycling Coalition | www.nrc-recycle.org |
| | Re-Think Your Bottom Line – Alameda County guide to reduce, reuse, and recycle | www.stopwaste.org |
| | Workplace Waste Reduction Guide (President's Commission on Environmental Quality Solid Waste Task Force) | www.whitehouse.gov/ceq |
| | Business Guide for Paper Reduction - Step by Step Plan to Save Money by Saving Paper (Forest Ethics) | www.forestethics.org/pdf/reduce.pdf |
| | | |
| *Printed on Glacier Evolution 70# text paper, 100% recycled, 100% post-consumer content, 100% processed chlorine free* | | |

# Appendix A

## Purchasing Paper

**National Park Service – Pacific West Region**

### Recommended Vendors

| Paper | Mill/Distributring Company | Website | Phone Number | % Recycled Content | % Post-Consumer Waste | Processed Chlorine Free | GSA Cost[4] |
|---|---|---|---|---|---|---|---|
| New Life DP 100[1] | Greg Barber Company | www.gregbarberco.com | 800-840-4555 516-413-9207 | 80% | 60% | Yes | $36.40 |
| Envirographic 100, Encore 100 | Badger Mill | www.badgerpaper.com | 415-219-9210 | 100% | 100% | Yes | $32.50 |
| Aspen 100 | Boise-Cascade | http://boisebc.com | 503-790-9424 | 100% | 100% | Yes | $37.60 |
| Eureka! 100 | Georgia Pacific | www.gp.com | 404-652-4000 | 100% | 100% | Yes[2] | $32.50 |
| JWOD | JWOD | www.jwod.com | 877-438-5963 | 90% | 50% | Yes[3] | $48.08 |

### Resources

- The Federal Network for Sustainability (FNS) of which the Pacific West Region of the National Park Service is a member, in conjunction with EPA, has embarked on a green paper initiative www.federalsustainability.org
- A web-based tool aimed at providing consumers with green paper vendors and resources to promote paper conservation www.conservatree.com

### Notes

[1]Recommended paper for the Pacific West Region's national parks
[2]Not certified by a third-party such as Chlorine Free Products Association
[3]Seeking third-party certification
[4]Cost estimate as of April 16, 2003 and subject to change. Purchasing directly from the manufacturer or distributor may offer lower prices. Cost for 1 case (10 reams, 500 sheets/ream, 8½" x 11" sheets).

# Appendix B

## EPA's Comprehensive Procurement Guidelines
## Green Procurement Federal Requirements
**National Park Service – Pacific West Region**

RECYCLED CONTENT MINIMUMS:
Note: The content levels for all EPA recommendations should be read as % recovered fiber, including % postconsumer fiber, and not as % recovered fiber plus % postconsumer fiber. This list only includes office related products. The entire CPG list also includes construction, landscaping, transportation, and vehicular products. Please see www.epa.gov/cpg for additional product specifications and other important information.

### Non-Paper Office Products

| Material | Description | % Post-consumer Fiber Content | % Recovered Content |
|---|---|---|---|
| **Designated:**<br>Office recycling containers and waste receptacles<br>plastic<br>steel (BOF)<br>paper – corrugated<br>paper – solid fiber box<br>paper – industrial paperboard | Used to collect and transport waste and recyclable materials - either in deskside or larger, more centralized containers. | <br><br>20 – 100%<br>16%<br>25 – 50%<br>40% minimum<br>40 – 80% | <br><br>25 – 30%<br>25 – 50%<br><br>100% |
| Plastic desktop accessories | Includes desk organizers, desk sorters, desk and letter trays, and memo, note, and pencil holders. Typically made from polystyrene and are manufactured by injection-molding. | | 25 – 80% polystyrene |
| Plastic envelopes | Used in heavy-duty, security-related, and other specialized mailing applications by the express mail, banking, legal, and other industries. Lightweight, tear-resistant, durable, water-resistant, and can be manufactured using recovered plastic. | 25% minimum | 25 – 35% |
| Plastic trash bags | Plastic trash bags, or trash can liners, are widely available with recovered material content. The amount of recovered materials used in the manufacturing process is affected by the color, size, and thickness of the bag. | 10 – 100% | |
| Printer ribbons | Used ribbons in printer cartridges that are reinked using electromagnetic machinery. Can be reinked until they reach the end of their useful life. Reloaded printer ribbons are new fabric ribbons that are reloaded into reused cartridges when used ribbons run out of ink. | Procure printer ribbon re-inking or reloading services or procure re-inked or reloaded printer ribbons. | |
| Toner cartridges | Used in laser printers, photocopiers, fax machines, and microphotographic printers. When the toner is replaced, the cartridges can be returned to the manufacturer to be refilled, refurbished, and cleaned for resale. | Procure remanufacturing services for expended cartridges or procure remanufactured toner cartridges or new toner cartridges made with recovered materials. | |

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| Pressboard binders | Binders, clipboards, file folders, clip portfolios, and presentation folders are commonly used office products made from a variety of materials. A loose-leaf binder contains split metal rings attached to a metal back that hold perforated sheets of paper. Chipboard, pressboard, plastic-covered chipboard or paperboard, cloth-covered chipboard or paperboard, and solid plastic binders can all be made with recovered materials. Clipboards, file folders, clip portfolios, and presentation folders can be made of solid plastic containing recovered materials. | 20% minimum | 50% minimum |
| Paper covered binders | | 75 – 100% | 90 – 100% |
| Plastic covered binders | | | 25 – 50% |
| Plastic binders (solid)<br>high density polyethylene (HDPE)<br>polyethylene (PE)<br>polyethylene tetraphtalate (PET)<br>miscellaneous plastics | | <br>90%<br>30 – 50%<br>100%<br>80% | <br>90%<br>30 – 50%<br>100%<br>80% |
| Plastic clipboards<br>HDPE<br>polystyrene<br>miscellaneous plastics | | <br>90%<br>50%<br>15% | <br>90%<br>50%<br>15 – 80% |
| Plastic clip portfolios – HDPE | | 90% | 90% |
| Plastic file folders – HDPE | | 90% | 90% |
| Plastic presentation folders – HDPE | | 90% | 90% |

**Other Opportunities:**

- Efficient, duplex capable, properly sized copy machine
- Energy Star plain paper fax machines
- Fax modems instead of paper fax machines
- Pens and pencils with recovered plastic and wood content
- Erasable and cork boards with recovered plastic and wood
- Energy Star computer equipment (pursuant to EO 12856)
- Biodegradeable and compostable (cornstarch) trash bags and utensils

## Paper and Paper Products

| Material | Description | % Post-consumer Fiber Content | % Recovered Content |
|---|---|---|---|
| **Designated:**<br>Copier paper and bond paper | Printing and writing papers comprise one of the largest categories of paper and paper products. Examples include copier paper, stationery, computer printout, offset paper, and note pads. Printing and writing paper can be either coated or uncoated. | 30% minimum | 30% minimum |
| Offset paper | | 30% minimum | 30% minimum |
| Tablet paper | | 30% minimum | 30% minimum |
| Forms (computer printout, forms ledger) | | 30% minimum | 30% minimum |
| Envelope paper, kraft | | 30% minimum | 30% minimum |
| Envelope paper, white and colored, including manila | | 10 – 20% | 10 – 20% |
| Envelope paper, unbleached | | 10% minimum | 10% minimum |
| Cotton fiber paper | | 30% minimum | 30% minimum |
| Text and cover paper | | 30% minimum | 30% minimum |
| Supercalendared | | 10% minimum | 10% minimum |
| Machine finish groundwood | | 10% minimum | 10% minimum |
| Papeteries | | 30% minimum | 30% minimum |
| Check safety paper | | 10% minimum | 10% minimum |
| Coated printing paper | | 10% minimum | 10% minimum |
| Carbonless paper | | 30% minimum | 30% minimum |

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| File folders (manila and colored) | | 30% minimum | 30% minimum |
| Dyed filing products | | 20% minimum | 20 – 50% |
| Cards (index, postal, other) | | 20% minimum | 50% minimum |
| Pressboard report covers, binders | | 20% minimum | 20% minimum |
| Tags and tickets | | 20% minimum | 20 – 50% |
| Bathroom tissue | Generally sold in rolls or sheets and are used in personal care, food service, and cleaning applications. The grades of sanitary tissue products covered in the CPG are manufactured for use by restaurants, hotels, schools, government agencies, and other similar commercial and institutional buyers. | 20 – 60% | 20 – 100% |
| Paper towels | | 40 – 60% | 40 – 100% |
| Paper napkins | | 30 – 60% | 30 – 100% |
| Facial tissue | | 10 – 15% | 10 – 100% |
| General purpose industrial wipers | | 40% minimum | 40 – 100% |
| Newsprint | A type of groundwood paper generally used to print newspapers. Usually manufactured from fiber recovered from old newspapers and magazines. | 20 – 85% | 20 – 100% |
| Corrugated Containers (<300 psi) | Packaging:<br>-Paperboard is used in a wide variety of packaging applications such as folding cartons, “blister cards”, beverage carriers, book and report covers, mailing tubes, and video cassette boxes. Paperboard containing recovered fiber is a multi-ply material, formed in layers of recovered fiber.<br>-Containerboard (corrugated board used to make shipping containers) is actually a composite paperboard made by sandwiching fluted "corrugating medium" in between layers of linerboard. | 25 – 50% | 25 – 50% |
| Corrugated containers (300 psi) | | 25 – 30% | 25 – 30% |
| Solid fiber boxes | | 40% minimum | 40% minimum |
| Folding cartons | -Linerboard, made primarily from both virgin and recovered fiber from old corrugated containers (OCC), is used to make the inner and outer walls of a box. The inside, fluted "medium" layer in the middle is made almost exclusively from postconsumer recovered fiber from OCC, old newspapers (ONP), used office paper, and mixed papers. | 40 – 80% | 100% |
| Industrial paperboard (tubes, cores, drums, cans) | | 45 – 100% | 100% |
| Miscellaneous (pad backs, covered binders, book covers, mailing tubes, protective packaging) | | 75 – 100% | 90 – 100% |
| Padded mailers | | 5 – 15% | 5 – 15% |
| Carrierboard | | 10 – 15% | 10 – 100% |
| Brown papers (wrapping paper, bags) | | 5 – 20% | 5 – 40% |
| Tray liners | “Doilies” or “place mats” –Specialty paper items designed to line food service trays in institutional and commercial facilities. | 50 – 75% | 100% |

**Other Opportunities:**

- Unbleached paper and tissue products and which do not have unnecessary dyes, inks, or fragrances
- Water based or vegetable/soy-based ink
- Reusable envelopes, folders, bags, scrap paper
- Paperless office practicesHigher PC content copier paper (e.g. Rolland New Life)

## Miscellaneous Products/Maintenance Supplies

| Material | Description | % Post-consumer Fiber Content | % Recovered Content |
|---|---|---|---|
| Awards and plaques | Generally made from blown glass while plaques can be made with a variety of recovered materials including wood, paper, plastic, and plastic/wood composites. | | |
| glass | | 75 – 100% | 100% |
| wood | | | 100% |
| paper | | 40 – 100% | 40 – 100% |
| plastic and plastic/wood composite | | 50 – 100% | 95 – 100% |
| Signs and sign posts/supports | Used for public roads and highways, as well as inside and outside of office buildings, museums, parks, and other public places. EPA's designation pertains to plastic signs used for nonroad applications (e.g., building signs, trail signs) and to aluminum roadway and nonroadway signs. The designation also covers any associated plastic or steel supports. | | |
| plastic signs | | 80 – 100% | 80 – 100% |
| aluminum signs | | 25% | 25% |
| plastic posts/supports | | 80 – 100% | 80 – 100% |
| steel posts/supports (BOF method) | | 16% | 25 – 30% |
| steel posts/supports (EAF method) | | 67% | 100% |
| Pallets | Rigid platforms made of wood, plastic, or paperboard used for shipping a variety of products. Wooden pallets can be repaired or rebuilt with wood from old pallets. Plastic and corrugated pallets can be manufactured from recovered materials. | | |
| wooden | | 95 – 100% | |
| plastic lumber | | 100% | |
| thermoformed | | 25 – 50% | |
| paperboard | | 50% minimum | |

**Other Opportunities:**

- Bubble wrap and other packing materials with recovered plastic content, biodegradeable cornstarch "peanuts"
- Compact fluorescent lighting
- Non toxic, biodegradable janitorial and equipment cleaners
- Rechargeable batteries, recycle spent batteries

# Appendix C

## Remanufactured Toner Cartridges

**National Park Service – Pacific West Region**

### Overview

One of the easiest ways to close the recycling loop is to purchase remanufactured toner cartridges. Recycling cartridges keeps valuable resources out of the landfills and preserves new resources from being used in new products. Most manufacturers sell remanufactured toner cartridges and will often pick up used ones at no cost when the new product is ordered and delivered. Remanufactured toner cartridges have performance standards higher than those made with virgin materials, with remanufactured at a failure rate of 2% and new at a failure rate of 3-5%. Remanufactured cartridges also cost 30-50% less than new cartridges, making it an ideal money saver in offices.

### Industry Buyers of Used Cartridges

**AMS Laser Supply**
800-289-5277
206-764-3344
Seattle, WA

**Laser Pro Technologies**
Roseville, CA
800-858-6637

**Ecology Action**
831-426-5925, x28
San Jose, CA

**Laser Care**
800-LASER-20
310-202-4200
Culver City, CA
www.lasercare.com

**Eco Imaging**
www.ecoimaging.com
Robert Meader
San Diego, CA
858-874-8220

**Laser Imaging International**
Chatsworth, CA
800-438-5273

**M.B. Sales**
Canoga Park, CA
818-710-0000

**Service 4U**
Laguna Hills, CA
949-859-9500
www.service4u.com

### Remanufactured Toner Cartridge Vendors

**UNICOR/Federal Prison Industries**
800-5UNICOR
Fort Dix, NJ

**AMS Laser Supply**
206-764-3344
Seattle, WA

**Future Solutions, Inc.**
303-460-7007
Broomfield, CO

**Print Recovery Concepts, Inc.**
207-642-9700
Standish, ME

**Office Depot**
www.officedepot.com
Sells a variety of brands and compatible remanufactured cartridges

**Office Max**
www.officemax.com
Sells numerous brands

**Cana-Pacific Ribbons**
360-366-7414
Fernadale, WA

**Cartridge Clearance Ctr**
714-379-3063
Huntington Beach, CA

**Catlin Industries Inc.**
805-522-4662
Simi Valley, CA

**Del Mar Imaging Corp.**
858-549-5090
San Diego, CA

**Future Graphics**
818-316-0656
Canoga Park, CA

**Graphic Technologies**
805-384-1600
Camarillo, CA

**Image Technologies**
818-610-2400
Canoga Park, CA

**Imaging Resources**
818-727-9740
Chatsworth, CA

**Laser Imaging**
International
800-438-5273
Chatsworth, CA

**Laser Recharger**
Technologies
800-606-0250
Northridge, CA

**Laser Resouce**
503-253-9274
Portland, OR

**MB Sales**
818-710-0000
Canoga Park, CA

**Rooster Toner & Ink**
702-649-3487
Las Vegas, NV

**Service 4U**
949-859-9500
Laguna Hills, CA

# Appendix D

## Purchasing an Environmentally Preferable Copier

**National Park Service – Pacific West Region**

### Overview

1) The Energy Star feature in a typical medium- to high-speed copier can reduce the machine's annual electricity costs by as much as 60 percent.
2) A copier with fast and reliable duplexing (double-sided copying) can reduce office paper use by 25 percent or more, saving money in the process.
3) Equipment will produce less heat when powering down, contributing to a cooler, more comfortable workspace; lowering air-conditioning costs, and helping reduce equipment failure, which increases the copier's life.
4) Using Energy Star labeled equipment helps reduce the air pollution (including significant emissions of sulfur dioxide, nitrogen dioxide, and carbon dioxide, which contribute to the problems of smog, acid rain, and global climate change) associated with energy generation.

### Basic Guidelines for Purchasing an Environmentally Preferable Copier:

Not all qualities will necessarily be able to be met. Ask the copier company representative to find this information. Although he or she may not know the answers right away, the representative should be able to find them. The copier should:

1) Comply with the EPA Energy Star Program – Tier II (standard size) or Tier III (large format). www.energystar.gov (see Key Product Criteria below)
2) Be programmable or clearly marked with duplexing options that can be set as default.
3) Use returnable or recyclable and remanufactured toner cartridges.
4) Use recycled-content paper, particularly when making two sided copies, without jamming problems.
5) Use organic photoreceptor (if not organic, it must not contain arsenic, cadmium, or selenium.)
6) Not use wet process technology.
7) Not emit ozone at a concentration in excess of .02 mg/m3.
8) Not emit dust at a concentration in excess of .25 mg/m3.
9) Not emit styrene at a concentration in excess of .11 mg/m3.
10) Contain no polybrominated biphenyls (PBBs) or diphenyl ethers (PBDEs).
11) Use toner that is free of carcinogenic, mutagenic, and teratogenic substances.
12) Be refurbished/reconditioned/remanufactured.
13) Make use of remanufactured parts.
14) Contain materials made with recycled content.
15) Use minimal packaging and/or arrange for packaging taken back for reuse.
16) Be able to be taken back by the vendor at the end of its useful life for reconditioning or recycling of parts.
17) Consider purchasing a multi-function machine, combining a printer, fax, scanner, and copier into one package. Multi-function machines often provide the office necessities that would cost over one and a half times that amount if bought separately. Their compactness and the multi-capabilities from a single print engine mean that less energy is being consumed – one print engine idling uses less energy than three print engines (fax, copier, printer) idling.

Information compiled from EPA's "Greening Your Purchase of Copiers" Environmentally Preferable Purchasing Guide; Energy Star's website, www.energystar.gov and other EPA resources.

## Key Product Criteria for ENERGY STAR Labeled Copiers*

STANDARD-SIZED COPIERS
Tier II

| Copier Speed (copies per minute) | 0 < cpm ≤ 20 | 20 < cpm ≤ 44 | 44 < cpm |
|---|---|---|---|
| **Low-Power Mode (Watts)** | None | 3.85 x cpm + 5 | 3.85 x cpm + 5 |
| **Low-Power Default Time** | NA | 15 min | 15 min |
| **Recovery Time 30 sec** | NA | Yes | Recommended |
| **Off Mode (Watts)** | ≤ 5 | ≤ 15 | ≤ 20 |
| **Off Mode Default Time** | ≤ 30 min | ≤ 60 min | ≤ 90 min |
| **Automatic Duplex Mode** | No | Optional | Optional |

LARGE FORMAT COPIERS
Tier III

| Copier Speed (copies per minute) | 0 < cpm ≤ 40 | 40 < cpm |
|---|---|---|
| **Low-Power Mode (Watts)** | NA | 3.85 x cpm + 5 |
| **Low-Power Default Time** | NA | 15 min |
| **Recovery Time 30 sec** | NA | Recommended |
| **Off Mode (Watts)** | ≤ 10 | ≤ 20 |
| **Off Mode Default Time** | ≤ 30 min | ≤ 90 min |
| **Automatic Duplex Mode** | No | No |

## Definitions

**Enable:** To set the power management feature of a given product such that the power saving features are automatically activated as specified in the product's ENERGY STAR Partnership Agreement with the manufacturer.
**Standby Mode:** The condition that exists when the machine is not making copies, has reached operating conditions and is ready to make a copy, but has not yet entered into energy-saver mode. When the copier is in this mode, there will be virtually no delay before the copier is capable of making the next copy.
**Low-Power Mode:** The lowest power state the copier can automatically enter within some period of copier inactivity, without actually turning off.
**Off Mode:** The condition that exists when the copier is connected to an appropriate electrical source, and has been recently shut off via the auto-off feature.
**Default Time:** The time period set by the manufacturer prior to shipping that determines when the copier will enter the low-power and off modes.
**Recovery Time:** The amount of time needed to bring the copier from a low-power mode to the standby mode.
**Automatic Duplex Mode:** The mode in which the copier automatically places images on both sides of a copy sheet, by automatically sending both the copy sheet and the graphic original through the copier model. Examples of this are one-sided to two-sided copying, or two-sided to two-sided copying. A copier model is considered to have an automatic duplex mode only if the copier model includes all accessories needed to satisfy the above conditions, i.e., an automatic document feeder and accessories for automatic duplexing capabilities.

*Taken from http://www.epa.gov/nrgystar/purchasing/6c_copiers.html#specs_copy

# Appendix E

## Battery Recycling

**National Park Service – Pacific West Region**

### Overview

Every year, billions of industrial and household batteries are bought and thrown away. The increase in cordless, portable products like cellular phones, video cameras, laptop computers, and battery-powered tools and games has created a huge demand for batteries of all types. Because many batteries contain toxic constituents such as mercury and cadmium, they pose a potential threat to human health and the environment when improperly disposed. Though batteries generally make up only a tiny portion of municipal solid waste (MSW)—less than 1 percent—they account for a disproportionate amount of the toxic heavy metals in MSW. When MSW is incinerated or disposed of in landfills, under certain improper management scenarios, these toxics can be released into the environment. Parks are not permitted to dispose of their waste batteries in the trash. Batteries should be returned to retailers, wholesalers, or recycling centers. Whichever service is chosen, it is important to verify that the recycling facility is properly permitted and operating in accordance with all federal, state, and local requirements.

### Resources

EPA's Product Stewardship for Batteries
www.epa.gov/epr/products/batteries.html

NPS's Envirofact Sheet for Management of Waste Batteries
www.nps.gov/renew/wbatmgt.pdf

Lead Acid Battery Recycling
www.batterycouncil.org/recycling.html

Rechargeable Battery Recycling Corporation
www.rbrc.org/index.html
State and federal mandates require battery manufacturers and battery resellers to recycle their Nickel Cadmium (Ni-Cd) rechargeable batteries in an environmentally safe manner. Several state and federal mandates also prohibit commercial users of Ni-Cd and Pb batteries from disposing of the batteries in municipal solid waste.

Recycler's World - Batteries
www.recycle.net/battery
Lead-acid, nickel, and other battery recycling resources. Recyclers, equipment, associations, and publications.

### Battery Recyclers

**Advanced Environmental Recycling Corp./MTI**
Hayward, CA
(800) 628-3675, (510) 429-1129
www.aerc-mti.com
Accepts all mercury bearing waste, lamps, ballasts, batteries.

**Battery Solutions**
Wayne, MI
(810) 494-5010, (800) 852-8127
www.batteryrecycling.com
Recycles all types of dry cell batteries including: household alkaline, button style, camera, rechargeable (cell/cordless phone, laptop computer), 9v, A, C, D ect.
You purchase the pail from them, fill it and mail it back for recycling.

**Earth Protection Services**
Lake Oswego, OR
(503) 620-2466, (800) 414-0443
www.earthpro.com
Provides environmentally responsible recycling of lamps, ballasts, and batteries. Recycling kits with prepaid lables available for shipping materials to their plant.

**ENSCO**
Auburn, WA
(800) 844-7173, (253) 288-3560
www.enscoinc.com
Provides recycling for nickel-cadmium, nickel-metal hydride and lithium ion batteries.

**National Environmental Services LLC**
Minneapolis, MN
(800) 872-2226, (952) 830-1348
www.nesllc.com
Accepts alkaline, mercury, lead-acid, lithium, and nickel-cadmium.

**Philip Services**
Seattle, WA
(800) 228-7872 Ext:7135
www.philipnow.com
Accepts nickel-cadmium and lithium ion batteries.

**PND Corporation**
Bellevue, WA
(425) 562-7252
Accepts (but is not limited to) nickel-cadmium, lead-acid, alkaline, mercury, silver and lithium batteries. Call for more details. $5 minimum (usually about 4 lbs.)

**Raw Materials Corporation**
Fort Colborne, Ontario
(905) 835-1203
www.vaxxine.com/rmcpage
Offers a Battery Box Program to recycle all types of batteries, including Lead Acid, NiCad, Alkaline, Mercury, and Lithium.
Box includes delivery of lined container, return frieght, recycling and instructions. Cost is $129.

**Romic Environmental Technologies**
Portland, OR 97220
(800) 819-5912, (888) 242-8592
www.romic.com
Accepts batteries for recycling.

**Toxco – "The Big Green Box"**
Anaheim, CA
(714) 879-2067
www.biggreenbox.com
Recycles all types of batteries. Offers a prepaid collection box, holds up to 45 lbs of batteries, includes shipping both ways and all recycling fees, available on GSA contract. Cost is $58. Larger volumes receive lower rates/lb.

# Appendix F

## Electronics Recycling Regulations and Resources

**National Park Service - Pacific West Region**

### Overview

Computers and other electronic devices such as copiers, cell phones, and faxes are the fastest-growing portion of the municipal waste stream. While the technology may become obsolete, the glass, steel, and plastic were built to last. These components can be recycled, but others like lead, cadmium, and mercury present environmental hazards if managed incorrectly. Computer monitors with cathode ray tubes (CRTs) - the picture tube - can contain between three to eight pounds of lead. Circuit boards also contain lead in addition to cadmium, mercury and other hazardous materials. Before recycling, however, the National Park Service must take appropriate steps for disposal of computers and other electronics.

### Property Management

Because computers and printers are government property, they must be handled as such. Federal regulations state that certain measures must be taken before disposing of government property. If the computers are in working condition: 1) The first priority is to donate them to a school. The Computers for Learning website (www.computers.fed.gov/property/pm1.asp) provides a quick system for donating excess computers to schools. 2) If schools do not want them, they must be offered to other government agencies through GSA. GSA's Federal Disposal System (FEDS) (http://159.142.4.130/fedsw) provides information on recording, tracking, and controlling the inventory of excess property. The NPS website for property management also has more information (www.nps.gov/propertymanagement) 3) If GSA does not donate or sell them, they can be recycled or donated through any organization. If the computers are not in working condition, they do not have to be offered to schools or GSA and can be recycled or donated as the first option. Some parks have donated working computers to nonprofit organizations that teach individuals how to fix computers, then the computers are donated to another organization. This can also be a first priority along with the schools.

### Protecting Government Data

One of the requirements for disposal of computer equipment is that no government data remains on the machines. On older machines where agencies didn't have to purchase a computer with an operating system (the computer runs on Windows 95 or Windows 98), a low-level format on the drives is sufficient for erasing sensitive information. This can be done with software packages such as DiskScrubber or Partition Magic which "degauss" the disk so that any data cannot be retrieved.

### Local Recycling Options

Often many local transfer stations or landfills will accept electronics for recycling. The phone book is also a valuable resource – look under Recycling Services, Environmental Services, Waste Disposal/Recycling, or Computer Dealers – Used and Recycled. It is recommended to call the company before taking electronics to the site to confirm the types of electronics they will accept and fees they charge.

### DOI/UNICORAgreement

The electronics agreement between the Department of the Interior and the UNICOR prison industries states that any DOI agency is able to recycle electronics through UNICOR at no cost. They recycle any type of electronics and will provide transportation of the materials. In order to get free transportation, a full truckload of electronics is needed. With less than a full load, a transportation fee would be paid, or electronics can be dropped off at the facility in Atwater, CA. Dropping items off is free of charge. A copy of the Memorandum of Understanding (MOU) is available by contacting Bretnie Grose (CCSO) at 206-220-4289.

Contacts for the UNICOR agreement:

- DOI: Bob Jarcho 202-208-3329, Chris McArthur 202-208-6649
- UNICOR: James Slayton (Atwater facility) 209-386-4861, Aaron Aragon (Atwater facility, transportation) 330-509-4750

## Resources on the Web

- California Integrated Waste Management Board's Electronic Product Management – Includes a state-wide list of recycling companies www.ciwmb.ca.gov/Electronics/
- EPA's Electronic Product Stewardship – Contains several links to other electronics recycling websites www.epa.gov/epr/products/computers.html
- EPA's Resource Conservation Challenge for Electronics www.epa.gov/epaoswer/osw/conserve/plugin/index.htm
- Electronic Industries Alliance's Consumer Electronics Initiative – Contains a national database of recycling companies www.eiae.org/
- ElectronicsRecycling.org – Includes a large database of recycling companies www.electronicsrecycling.net/menu2/Search/Search.asp
- Alameda County's Stop Waste Program – Includes recycling companies in the Alameda County region recycle.stopwaste.org/vendors.asp?material=ELC
- Federal Network for Sustainability's Electronic Product Stewardship Initiative www.federalsustainability.org/initiatives/eps.htm
- The International Association of Electronic Recyclers – Directory of the electronics recycling industry www.iaer.org/search

# Appendix G

## Environmentally Preferable Printing Practices

**National Park Service – Pacific West Region**

### Overview

Whether creating publications at work, at home, or in a print shop, all printing processes use resources and produce waste. Minimizing the environmental impact of printing can often be challenging, but there are some actions that can improve make printing more environmental without sacrificing quality or cost.

### Paper

- Use paper with high recycled content, particularly high post-consumer content.
- Use processed chlorine free, unbleached paper.
- Use paper with the least basis weight appropriate for your print job. For copy paper, use 20# text; for newsletters and brochures, use 60-70# text; for fliers, depending on durability needs, use 20-65# text;
- Coatings can provide durability and aesthetic elements to paper, which may be desirable for particular printed materials. However, recycling paper with coatings, colors, or finishes can generate more sludge or harmful waste by-products than untreated paper.

### Inks & Toners

- Copiers and laser printers use toner, while inkjet and other printers use ink. Vegetable- (such as soy) or water-based inks are the most environmentally friendly printing inks, but print jobs vary and the best choice may not be the same every time. Soy inks are common in many print shops and are usually preferable over water-based inks because of quality. However, virtually all desktop inkjet printers for home or office use water-based inks.
- Soy inks are safe for workers, do not contain petroleum, and have less VOC emissions. Soy inks provide high-quality finishes, particularly in colors, they offer greater stability than petroleum-based inks, and they require shorter start-ups and less waste. Soy inks are most used in newspapers and large-scale projects, but can be specified when sending a job to a printer.
- Toner used in laser printers and copy machines is essentially dry ink that bonds to paper under heat and static electricity. Toner is less environmentally friendly because it depends on petroleum, but some believe toner is more efficient than ink, and therefore creates less waste and conserves resources. In general, however, using inks is more environmentally preferable than using toners.
- Minimizing the amount of colors used in a printing job will reduce the amount of waste produced, resources used, and money spent.

### In-House Copying and Printing

- Copiers and laser printers are often more economical and resource efficient for an office's small scale printing than inkjet printers. Making copies of a single document is more efficient than printing the same number of copies from a printer, regardless of inkjet or laser printer.

### Large Scale Printing

- Offset printing is the traditional method for large-scale print jobs. This process requires the paper to be larger than its final size because the printer needs grabbing space on the edge of the paper in order to run through the press. Print shops often have concerns about the grain of the paper, so communicating specifications is important. It may be better to specify the characteristics desired in the paper used rather than supplying the paper.

## Working with a Print Shop

- When sending a print job to a printer, such as the Government Printing Office, discuss ahead of time the environmental qualities desired. Know your specifications before sending your job to the printer (% recycled content, vegetable-based ink, paper weight, double-sided, etc.). Ask questions concerning the most efficient way of meeting your needs. Learning about the printing process will ensure the best product.
- Without sacrificing sustainability, be flexible about preferences. If specs don't fit the printing needs, printing may become too difficult, time consuming, and less cost-effective. Every print job differs, so it is important to use resources efficiently according to each project need. Examples: Specify a renewable ink (soy, water, or other vegetable-based) rather than a single type of ink; specify paper characteristics rather than requesting a vendor.

## Purchasing Equipment

- Be aware of the environmental impact of office equipment. Purchase printers and copiers that readily accept recycled-content paper and provide double-sided printing and copying without jamming.
- Purchase remanufactured toner cartridges and refillable ink cartridges. Both are cheaper and guaranteed to perform as good or better than new products.

## Resources

- Seattle Office of Sustainability and Environment's *Office Equipment Guidance*

www.cityofseattle.net/environment/purchasing.htm

- Vegetable Based Printing Inks

http://fox.nstn.ca/~grnprint/MetroGraphic/veg-inks.hmtl

- National Soy Ink Information Center

www.soyink.com

- *How Inkjet Printers Work* (and links to other printing information)

www.howstuffworks.com/inkjet-printer.htm

- Conservatree

www.conservatree.com

- Living Tree Paper Company

www.livingtreepaper.com

- Printers' National Environmental Assistance Center's *Environmental Technology Fact Sheet*

www.pneac.org/sheets/litho/inks.html

## Examples of Publications Using Environmentally Preferable Printing Practices:

- Sustainability News – NPS
  - Paper Type: New Leaf Reincarnation, 70# text, matte, 100% recycled, 50% post-consumer content, processed chlorine free
  - Ink: Vegetable-based ink

- PWR Environmental Purchasing Guide (reference manual)
  - Paper Type: New Life DP 100, 20# text, 60% post-consumer content, processed chlorine free

- EPA's EPP Update
  - Paper Type: Varied brands – example: Sandpiper by Domtar, 100% post-consumer content, processed chlorine free

- PWR Youth Conservation Corps Newsletter
  - Paper Type: Glacier Evolution, 70# text, 100% post-consumer content, processed chlorine free, Greg Barber Co.
  - Ink: Inkjet water-based ink

- Green Line – NPS Concessioners
  - Paper Type: RIS Benefit paper , 70# text, 100% recycled content, 30% post-consumer content, processed chlorine free, acid-free
  - Ink: Soy ink

# Appendix H

## Records Management and Sustainability

**National Park Service – Pacific West Region**

### Overview

The concept of records management often creates an image of printing, copying, and indefinitely storing every document an office creates. This is wasteful, unsustainable, and doesn't really constitute "management". Records management means keeping only records that you access frequently and either destroying them after their retention time has expired or transferring them when you no longer need them on-hand. Making unnecessary copies of files, keeping individual file stations, and storing files longer than required creates inefficiency and waste.

### Sustainability and Records Management

1) All records must be filed and stored according to NPS-19 Records Disposition Schedule and the National Archives General Retention Schedules (GRS). Records must be destroyed after the retention time has expired.
2) NPS offices and units are required develop and document filing systems as part of an overall records management process to meet their business needs and fulfill the Standards of Accessibility in NPS-19. They must make records locatable and available during regular hours, fulfill Freedom of Information Act (FOIA) and other legal search requirements, share information with researchers and the public to the extent allowed by law, etc.
3) There is no Service-wide mandate for the use of central files or any other particular filing system. Choose a method based on your work unit's needs:
    a) Centralized file stations: These maintain records in one official location and are useful when multiple work units need the same records, and units are near the central file for prompt service, and the security of classified material requires central filing.
    b) Decentralized file stations: These maintain records in more than one location and work best when records are of interest to one unit, or centralized filing is too distant for efficient service, or information must be immediately available to the originator, or constant reference is made to the records by a particular unit.
    c) An individual's office: This is not recommended because general access is limited and awkward and records can be mistaken for personal papers.
4) Keep organized. The better you manage your records, the more efficient your office becomes. It saves time, provides for easy access to important information, reduces the possibility of erroneous record destruction, ensures prompt disposal of records, and saves storage resources.
5) Limit records creation. Don't make unnecessary duplicates. Analyze forms and reports to see if any of these tools can be consolidated and still meet staff needs and fulfill reporting requirements.
6) When we manage our records as we are supposed to do (file, dispose, and transfer as directed), we conserve resources because we reduce duplication (born of mistrust of the system) and improve efficiency while protecting and making available the records that are most important to us.

### Individual Employee Responsibility for Records

1) Ensure records received and created in your work are managed responsibly.
2) Ensure records are accessible to other employees if and when appropriate.
3) Use appropriate supplies/equipment to properly house records for security/safety.
4) Set up files in groups according to type, use, and retention.
5) Keep up with filing.
6) Use NPS-19 and the GRS to identify permanent and temporary records.
7) Never remove Federal records from premises for personal retention without permission from your supervisor.
8) Identify annual records management actions and set a time period to complete.
9) Ensure close-out/transfer of records to other employees or Records Center with assistance of supervisor and Records staff.
10) Take advantage of NARA's free services, which include coming on site to do records inventories with facilities, aiding in creating plans for records management, eliminating excessive duplication of materials, and training on what needs to be kept as a record and what does not.

## Electronic Records Issues

1) The Government Paperwork Elimination Act (GPEA) requires Federal agencies, by October 21, 2003, to provide individuals or entities the option to submit information or transact with the agency electronically and to maintain records electronically when practicable. The GPEA was created to reduce the amount of paper filed in an office and support electronic forms, storage, and access.
2) Electronic record keeping systems must be planned carefully to avoid the problems that arise as software and hardware evolve. Records may become unreadable due to obsolete technology.
3) If the records to be stored have a retention period of five years or less, there is no need to print this data. It should be stored electronically. Electronic storage may also be used if the records have a retention period of more than five years but less than the projected lifecycle of the system. (So the technology will not become obsolete during the life of the record).
4) Permanent records require a program of regular maintenance if they stay in electronic form or they may be converted to microfilm or paper if appropriate.
5) Records must be organized prior to entry in an electronic system because such systems do not fix records organization problems, they capture them. If stored correctly, electronic files can be just as easy or easier to organize than hard copy files. Create file and directory names to reflect content and purpose. Arrange directories from general to specific, similar to file cabinets.
6) Use security measures when saving files. Backup your files and store them on internal drives, networks, tapes, or disks. Printing a document does not always ensure it will be kept and filed properly.

## Benefits of using electronic technology for records management and transactions

1) Faster transactions. Both the partner and the agency may spend less time completing the transaction and they can get real-time help if there are problems.
2) Increased partner participation and customer satisfaction. Speed decreases partners' costs, which often leads to more partners completing the transaction.
3) Improved record keeping efficiency and data analysis opportunities. If data are easier to access and store then they can enhance program evaluation and expand awareness of the effects of our programs.
4) Increased productivity and improved accuracy. Electronic transactions tend to have fewer errors because often the system minimizes retyping and automatically detects certain errors. These benefits allow the employees to concentrate more time on other matters.
5) Greater information benefits to the public. Moving to electronic transactions and electronic signatures can make the related information more accessible to the public and FOIA requests.
6) Improved security. Designed, implemented, and managed properly, electronic transactions can have fewer opportunities for fraud and more robust security measures than paper-and-envelope transactions.
7) Extensive security for highly sensitive information. Even though a more secure electronic signature option is often more expensive initially than implementing less secure alternatives, there could be larger expected benefits if the information being protected is particularly sensitive.

## References

- NPS Director's Order #19: Records Disposition Schedules http://data2.itc.nps.gov/wapc/shortsch.doc
- NARA www.nara.gov , General Records Schedule http://ardor.nara.gov/grs/index.html
- Department of Interior – Records Management www.doiu.nbc.gov/orientation/records.html
- GPEA guidance www.archives.gov/records_management/policy_and_guidance/electronic_signature_technology.html
- NPS FOIA page www.nps.gov/refdesk/npsfoia.html