

WasteWise Update

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**ENVIRONMENTALLY
PREFERABLE
PURCHASING**



Preserving Resources,
Preventing Waste

Environmentally Preferable Purchasing

Although the United States comprises less than 5 percent of the world's population, it consumes more than 25 percent of the world's resources. To minimize the environmental burden posed by this staggering consumption rate, an increasing number of agencies, businesses, and institutions are changing the way they shop. By choosing sustainably produced, environmentally sensitive products and services, organizations adopting environmental (green) purchasing programs are making their money work for the environment. As a result, more and more Americans are taking actions to conserve natural resources, reduce air and water pollution, decrease toxic and hazardous wastes, and conserve energy.



What is EPP?¹

Environmentally preferable purchasing (EPP), a concept that melds procurement and environmental sustainability into an environmentally conscious purchasing strategy, advocates multifaceted environmental purchasing decisions. In short, EPP encourages government agencies, businesses, and institutions to consider multiple environ-

mental attributes of both products and services prior to purchase. EPP includes a wide spectrum of activities, from purchasing recycled-content supplies to reducing the number of toxic chemicals purchased to minimizing energy consumption through energy-efficient technologies.

Hundreds of WasteWise partners already recognize the economic and environmental benefits of waste prevention and recycling. Environmentally preferable purchasing moves beyond the scope of WasteWise by encouraging organizations to consider not only the durability, recyclability, and recycled-content of products purchased, but also the impact of their purchases on biodiversity, air and water pollution levels, and worker and consumer safety. By examining the characteristics of a product across its life cycle, organizations have the information they need to begin to reduce the environmental impacts of their purchasing decisions. For example, products with reduced environmental impacts include:

¹ In this issue, we use the terms "environmentally preferable purchasing" and "green" purchasing synonymously. However, within the federal government, EPP has a very specific definition, as defined by Executive Order 13101 and further elaborated by EPA's *Final Guidance on Environmentally Preferable Purchasing for Executive Agencies* (64 FR 45810). (See text box on page 4.) Regardless which terms are used, they all share the simple concept of incorporating environmental considerations in purchasing decisions along with price and performance.

- Chlorine-free or tree-free paper
- Recycled-content office supplies
- Paint with low volatile organic compound (VOC) content
- Cellulose insulation
- ENERGY STAR®-labeled electronic equipment
- Recycled-content or organic clothing

Economic Benefits of EPP

Businesses and organizations engaging in green purchasing practices contribute to environmental sustainability while demonstrating business savvy. Implementing EPP strategies can help organizations save money by decreasing purchasing and disposal costs. Organizations can work with suppliers to alter many characteristics of the products they purchase. For example, organizations can avoid disposal costs while improving their recycling and reuse rates by purchasing or requesting that suppliers use uniformly sized wooden pallets. Many organizations also find that purchasing lightweight packaging for their products leads to economic and environmental benefits. Lighter packaging uses fewer materials during manufacturing and reduces the amount of energy required to produce and transport it. Organizations can request that suppliers use a greater percentage of recycled material in packaging and other products, including office supplies, furniture, electronics equipment, and carpet. By purchasing recycled-content products, organizations help fuel the recycling market.

Organizations can also improve their public image by publicizing their commitment to conserving natural resources. Believing that a cleaner, healthier environment goes hand in hand with a strong economy, New Jersey-based utility company, **Public Service Enterprise Group (PSEG)**, strives to demonstrate environmental stewardship and corporate social responsibility. Strong working relationships with its vendors play a key role in enabling PSEG to meet environmental purchasing goals. In addition to an extensive buy-recycled program (the company spent more than \$3.5 million on recycled-content products in 1999), PSEG has established a take back program with its paint vendor, allowing the company to receive credit for unused paint. The partnerships PSEG has formed with its vendors over several years have paid off for PSEG, allowing the company to save money, reduce waste, and conserve natural

Benefits of Environmental Purchasing

From conserving natural resources to reducing the use of toxic substances, green purchasing can offer numerous environmental benefits. Evaluating products on a case-by-case basis will help you assess the environmental impact of your purchases.

Environmental benefits include, but are not limited to:

- Reducing materials consumption
- Providing a useful outlet for recycled material
- Reducing greenhouse gas emissions
- Conserving energy
- Conserving water
- Increasing the use of renewable products
- Reducing the presence of toxic materials in the environment

Such benefits in turn:

- Improve public and occupational health and safety
- Improve wildlife habitats
- Decrease air, water, and soil contamination
- Improve compliance with environmental regulations
- Decrease costs associated with waste management, disposal, and cleanup
- Promote a sustainable economy
- Develop markets for environmentally preferable goods and services

resources. WasteWise distinguished PSEG as a 1999 Program Champion and a 1998 Partner of the Year for its achievements in solid waste reduction.

Businesses gain a competitive edge by promoting the environmental attributes of their products and services. In markets where price competition is intense, environmental

Federal Agencies Go Green with EPP

The federal government is the single largest purchaser in the United States, spending more than \$275 billion annually on products and services. Associated with this purchasing power is the government's tremendous environmental footprint. Executive Order (E.O.) 13101, *Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition*, and recent changes to the Federal Acquisition Regulation (FAR) aim to minimize the environmental impact associated with the federal government's purchase of everything from paper to computers to buildings, as well as a wide range of services such as custodial and construction services. The E.O. and FAR mandate that all federal agencies purchase environmentally preferable products and services, i.e., those that have a lesser or reduced effect on human health and the environment when compared to products and services that serve the same purpose.

EPA's Environmentally Preferable Purchasing (EPP) Program was established to provide guidance, tools, and information to assist agencies implement this requirement. Many of the EPP Program's activities are derived from the following five Guiding Principles, established to help Executive agencies identify and purchase environmentally preferable products and services:

1. Include environmental considerations as part of the normal purchasing process.
2. Emphasize pollution prevention early in the purchasing process.
3. Examine multiple environmental attributes throughout the product and services life cycle.
4. Compare environmental impacts when selecting products and services.
5. Collect accurate and meaningful information about performance of products and services.

EPA's EPP Program provides a wealth of information about establishing individual EPP programs and determining environmental standards. The program also conducts case studies, publishes fact sheets, and offers an online environmental information database, all of which are available on the EPP Web site <www.epa.gov/opptintr/ep>.

performance can be the differentiating factor that influences consumers' purchasing decisions. Increasingly, buyers want to know what went into making a product as well as how the product performs. For example, furniture manufacturer **Herman Miller** conducts lifecycle analyses (LCAs) on the products it manufactures in order to better assess the environmental impacts of various material choices and production processes. Furthermore, the results of LCAs provide a basis from which Herman Miller can reassure its customers that the products they purchase are environmentally sustainable. The company regularly responds to inquiries about the environmental attributes of its products and actively promotes its commitment to environmental sustainability. Herman Miller established a goal to complete a lifecycle analysis on all of its new products by 2001.

Whether you are starting from scratch or building upon an existing environmental program, such as a waste reduction or buy-recycled program, you can design an environmental purchasing program to fit your organization's goals, needs, and resources. This *Update* provides an overview of the EPP concept and offers guidance for establishing your own program. Snapshots of successful activities of WasteWise partners provide suggestions for developing, implementing, and assessing an environmental purchasing program. For further information about EPP, please refer to a comprehensive list of resources provided at the end of this document.

Developing Your EPP Program

An effective EPP program depends on thorough planning and participation from numerous individuals. To design and implement an effective program, organizations need to outline achievable goals and develop a plan for attaining them. Successful environmental purchasing programs often contain the following elements:

- A green team to guide and promote the program.
- Measurable goals by which success can be evaluated.
- An organization-wide EPP policy highlighting philosophy and objectives.
- Support and involvement from all levels within your organization.

Establish an EPP Team

With few exceptions, purchasing is not a single person's responsibility—many different individuals within various departments request products or services, while others are responsible for obtaining them and negotiating contracts. The most successful way to incorporate environmental aspects into this process is to establish a team of individuals with purchasing and environmental expertise. For a small organization, a team might consist of just two or three people, while larger organizations might opt to create a team of employees from several different departments. A diverse team with different institutional perspectives ensures that all opportunities to incorporate environmental considerations will be explored.

In the early stages, your team might need to meet frequently to kick off the program, but eventually might need to meet only periodically to monitor progress and re-evaluate goals and purchasing practices. As your environ-

mental purchasing process evolves, some of the issues your team may need to address include:

- Developing a written policy stating your organization's commitment to environmental purchasing.
- Obtaining support for the policy from both management and staff.
- Reviewing purchases and researching new products.
- Educating employees about purchasing procedures.
- Monitoring and publicizing the success of the program.
- Re-evaluating goals and policies.

It is important to keep team members enthusiastic about the program so they will commit time and energy to the effort. To increase motivation and provide incentives, it may help to recognize team members at meetings or in company newsletters. The EPP team should also consider appointing a team leader to act as a liaison between management and the team.



Establish Goals for the EPP Program

Depending on the size of your organization and EPP team, the program might need to begin on a small scale. Consider focusing the program's goals on a single attribute, such as recycled-content percentages, and then eventually expand your goals to include multiple environmental attributes or even decreasing the environmental impact of a product throughout its entire life cycle, from its manufacture to its disposal. In the beginning of what is currently an extensive EPP program, the **Commonwealth of Massachusetts** focused on purchasing recycled-content paper and envelopes. Building upon experience gained in this area, the commonwealth expanded its program to consider additional environmental attributes, including low-toxicity cleaning products, biobased lubricants, and energy-efficient lamps and office equipment, just to name a few.

The goals your EPP team develops should be based on the environmental attributes that your organization can effectively address without adversely affecting the performance and cost of products and services. Although it is important to remember that not all attributes will be applicable to every organization, some that you may want to consider are:

- Recycled-content percentages
- Energy- and water-efficiency ratings
- Toxic materials content
- Use of renewable resources
- Occupational health and safety impacts
- Non-renewable resource consumption
- Bioaccumulative pollutants
- Chemical releases
- Waste generation (solid, hazardous, air emissions, etc.)

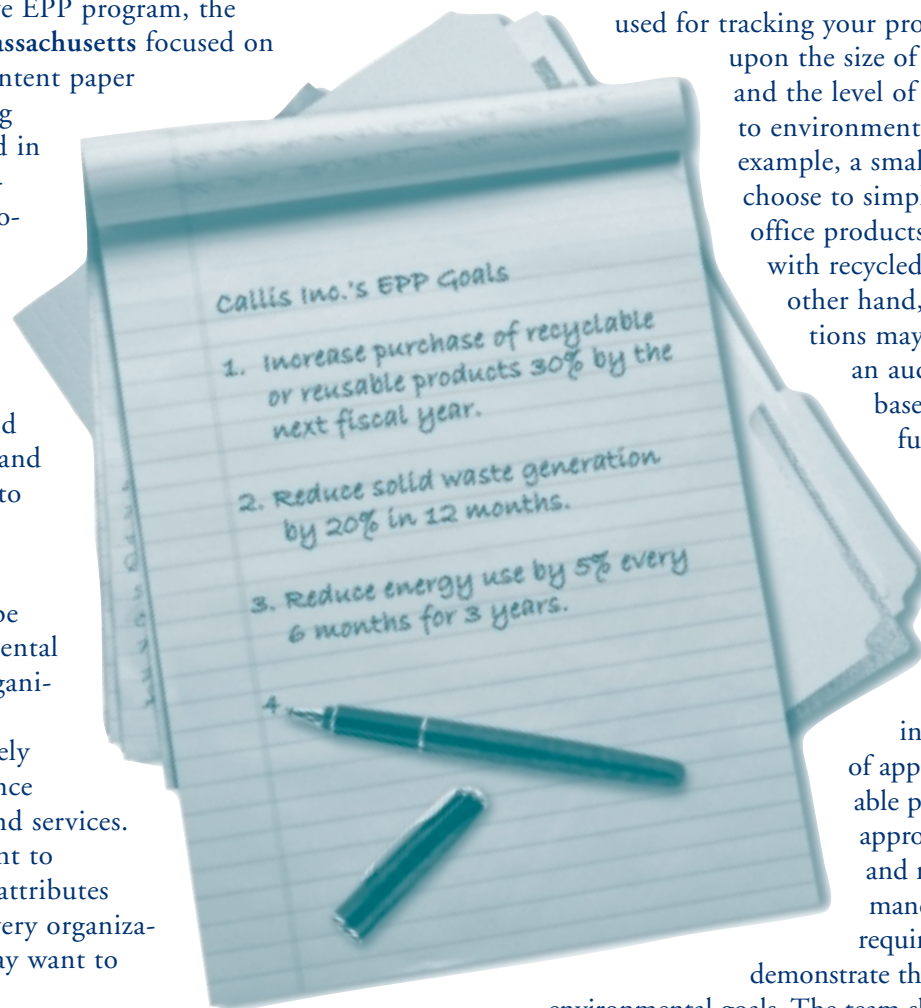
To establish program goals, the EPP team should review current purchasing practices, including the procurement of services, invoices, and resource consumption records (e.g., water and electric bills). Examining these records will help you identify areas and materials where policies will be most effective. Whenever possible, the team should establish measurable goals and a time period by which they can be met (e.g., reduce solid waste generation by 20 percent in 12 months; increase spending on green products and services 30 percent by the next fiscal year; and increase number of environmentally enhanced contracts over next 24 months). The method

used for tracking your progress will depend upon the size of your organization and the level of your commitment to environmental purchasing. For example, a small business may choose to simply replace specific office products with those made with recycled materials. On the other hand, larger organizations may want to conduct an audit and establish a baseline for measuring future progress.

Next, the EPP team will need to determine how the organization will meet the established goals.

This might include creating lists of approved or unacceptable products, establishing approved supplier lists, and negotiating performance-based contracts requiring vendors to

demonstrate their ability to meet environmental goals. The team should assess and identify commonly used products and services that could be replaced with green alternatives. Contact current vendors to discuss alternative products that meet the new purchasing criteria and check with other suppliers to see what they can offer. A number of state and local environmental or natural resource offices have programs that can provide you with additional resources on how to meet your environmental goals through green purchasing. Additionally, consulting with other businesses and organizations in your industry may prove helpful in identifying opportunities for environmental purchasing and waste reduction.



Sample EPP Policy

The purchase and use of products and services can profoundly impact the environment. [NAME OF ORGANIZATION] recognizes the positive impact that it can make on the environment through the purchasing decisions that its employees make. It is the intent of [NAME OF ORGANIZATION] to integrate environmental considerations into every aspect of acquisition. Although the environment might not be the core of our professional mission, the integration of these factors will result in economic, health, and environmental gains that will further our goals.

Overall Statement of Policy

- Personnel should seek to reduce the environmental damages associated with their purchases by increasing their acquisition of environmentally preferable products and services to the extent feasible, consistent with price, performance, availability, and safety considerations.
- Environmental factors should be taken into account as early as possible in the acquisition planning and decision-making process.
- Responsibility for environmentally preferable purchasing should be shared among the program, acquisition, and procurement personnel.
- Environmentally preferable purchasing represents one important component of this organization's commitment to pollution prevention.

[NAME OF ORGANIZATION] is committed to the following:

- Increasing the acquisition of environmentally preferable products and services.
- Identifying and implementing pilot projects to test the best ways to incorporate environmental preferability into acquisition.
- Establishing incentive and award programs to recognize those people, teams, and workgroups that are most successful at promoting the purchase of environmentally preferable products.

Adapted from U.S. EPA's EPP Web site: <www.epa.gov/opptintr/epp/finalguidanceappx.htm>.

King County, Washington's environmental purchasing policy is also available to view online at: <www.metrokc.gov/procure/green/mdpolicy.htm>.

Write an EPP Policy

Developing an organization-wide EPP policy helps generate greater momentum for your efforts and makes it clear to all staff that green purchasing principles are to be incorporated into routine operations. An environmental purchasing policy should highlight the environmental attributes and goals most important to the organization and include a requirement that employees maximize one or more of the attributes when making purchasing decisions. The policy might briefly address the “who, what, and why” of environmental purchasing and include the organization's general EPP philosophy, a statement of commitment, the scope of the program, objectives, and benefits. The policy should receive endorsement from upper management and, if applicable, be incorporated into a company's overall environmental management system.

Obtain Support from All Levels

Upper management support is important to making environmental purchasing a priority and facilitating the development of the program. To “sell” the concept to management,

the EPP team should stress the advantages of implementing environmentally preferable purchasing, such as health and safety benefits, regulatory compliance, cost savings, and improved public relations.

After establishing an EPP policy and goals and gaining management's approval, the program should be presented to the entire organization. Consider a kickoff event at which a senior member of the organization presents the program's goals and policy. Let employees know that this is an evolving program and that their participation and suggestions for improvement are the key to its success. Employee participation may be encouraged through the use of incentives—offer prizes or awards to departments that implement the most environmental purchasing initiatives or recognize individual employees who actively participate in your environmental purchasing program in newsletters or at staff meetings.

The EPP team should periodically promote the program after the kickoff meeting by publicizing achievements and changes in goals or policy. Sharing information and program updates through staff meetings, company newsletters, or e-mail announcements helps keep employees in the EPP loop.



Implementing Your EPP Program

Organizations that have established successful EPP programs take a comprehensive approach to procurement by encouraging purchasers to examine an array of product attributes in addition to cost and performance factors. Many commonly used products and services, including office supplies, cleaning products, electronics, and building materials, can be replaced with more environmentally preferable alternatives.

“Closing the Loop” with Office Supplies

Office supplies manufacturers are increasingly offering a wide range of products made from recycled materials. Taking advantage of the ready availability of recycled-content products and the steady need for supplies, many organizations find purchasing office supplies to be a natural starting point.

These products generally compare favorably in both quality and price to similar items made from virgin materials, and they divert material from the waste stream into productive use. By purchasing recycled-content office products, your organization can help close the recycling loop and strengthen market demand for recycled goods.

Commonly available recycled-content office supplies include:

- Paper products, such as notebooks, calendars, file folders, copier and printer paper, envelopes, and self-adhesive notes.
- Computer supplies, such as diskettes, CDs, toner cartridges, and mouse pads.
- Plastic items, including desktop accessories, binders, transparencies, bubble wrap, wastebaskets, recycling receptacles, and report covers.
- Pens, pencils, and art supplies.

Modern manufacturing techniques have closed the performance gap between recycled-content and virgin office supplies. Most organizations find that experimentation with content percentages and brand names can yield a competitively priced, recycled-content office product. Some organizations also augment green purchasing efforts by giving preference to manufacturers that offer recyclable or reusable office supplies. A simple way to encourage employees to purchase recycled office supplies is to highlight products' recycled-content percentages in internal supply listings or catalogs.

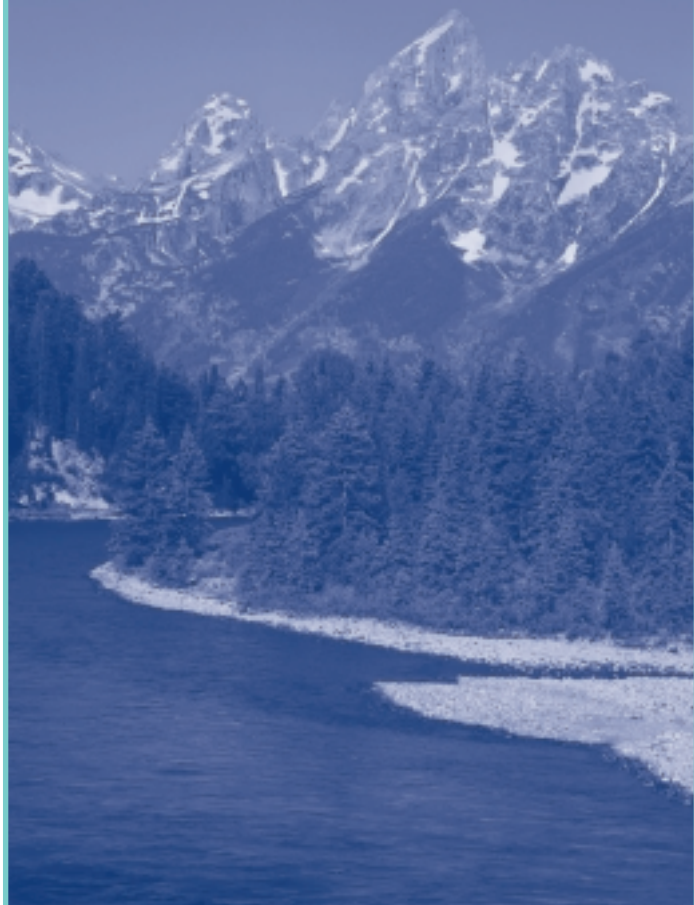
An increasing number of office supplies can be selected for environmental attributes in addition to recycled content. One example is paper products manufactured using a combination of kenaf and tree pulp. Kenaf is an annual crop that can be cultivated on existing farmland, where its life cycle encourages farmers to practice beneficial crop rotation methods. Kenaf paper, which has been used for printing catalogs and books, requires less energy and fewer chemical additives to process than traditional wood pulp. Your organization also can switch from liquid correction fluid to less toxic correction tape and use refillable pens and tape dispensers to reduce the environmental impacts of your purchases.

Cleaning "Green"

Certain chemicals and cleaning products can pose a serious threat to workers' health, causing respiratory distress and irritating the eyes and skin. They also can include ozone-depleting substances, toxic materials that adversely affect plant and animal life, and chemicals that can accumulate in the environment with potentially harmful consequences. Using these substances can be expensive to store and dispose of, and can lead to decreased worker productivity through illness. In 1999, **Yellowstone National Park** began purchasing environmentally preferable cleaning products when an initial assessment revealed that many cleaning agents used in its facilities contained potentially harmful chemicals. Adopting 12 environmental criteria for

Eco-labeling

How can you verify manufacturers' claims that their products are environmentally preferable? Although there is no standard "official" designation process, a number of third-party organizations benchmark various products for their environmental attributes and certify a product or service as preferable compared to similar products. For example, **Green Seal** <www.greenseal.org> sets standards and awards a "Green Seal of Approval" to products that cause less harm to the environment than other similar products. In its Environmental Partners Program, organizations such as colleges, businesses, and governments agree to buy green products. Green Seal provides partners with the 110-page *Office Green Buying Guide* and the *Choose Green Reports*, a monthly series that examines environmentally preferable products and services and provides a comparative list of manufacturers and sources. **Scientific Certification Systems (SCS)** <www.scs1.com> certifies specific environmental claims (e.g., percent of recycled content) made by manufacturers. SCS also produces an environmental "report card" for key lifecycle aspects of products. The **Global Ecolabeling Network (GEN)** <www.gen.gr.jp> is a non-profit association of ecolabeling organizations from around the world. GEN promotes and develops the ecolabeling of products and services by fostering information exchange among its members and disseminating information to the public.



Working with Vendors

Organizations implementing an EPP program inevitably realize the importance of working with manufacturers, distributors, and contractors to achieve environmental goals. Consult with vendors for information on the environmental attributes of their products. Reviewing vendors' environmental performance, sharing your environmental philosophy with vendors, and requesting products that contain attributes set forth by your EPP policy will help establish clear lines of communication about your purchasing goals. For example, **Canon USA, Inc.'s** environmental procurement guidelines include an index for evaluating the potential environmental impacts of both products and suppliers. The index evaluates product manufacturers using 35 criteria in 7 categories, including corporate environmental philosophy, environmental management systems, and corporate environmental reporting. Additionally, a number of WasteWise partners, including **Herman Miller** and **Anheuser-Busch Companies**, have integrated environmental criteria into their supplier selection process. For more ideas and case studies on working with vendors, see the *WasteWise Update: Building Supplier Partnerships*.



cleaning product procurement developed by the City of Santa Monica, the park reduced the number of cleaning products used from more than 130 to 9, all of which were significantly less harmful but just as effective as the traditional products they replaced.

Environmentally preferable cleaning supplies help protect human health by limiting exposure to potentially harmful chemicals. Some organizations experience fewer serious job-related accidents and worker compensation claims after switching to alternative cleaning products. Generally, products that are less harmful to human health also minimize environmental impact. For example, low-toxicity cleaning products reduce air and water pollution. Switching to environmentally friendly cleaning products that are available in recyclable, recycled-content, or bulk packaging also can reduce solid waste generation. Combined, these factors have persuaded many organizations to search out green substitutes.

In addition to price and performance, organizations may choose cleaning products according to product content, overall environmental impact of manufacturing process (if known), product packaging, or product use and disposal. EPA's April 2000 *EPP Update* includes an article highlighting "green" cleaners and provides an extensive list of resources about cleaners at www.epa.gov/opptintr/epp/cleaners/resource.htm.

Expanding EPP to Electronics

Most businesses and organizations use personal computers, photocopiers, and other electronic equipment as an integral part of their daily operations. However, these appliances typically consume large quantities of energy, draining resources and costing organizations thousands of dollars each year. Much of this energy is wasted when unused computers are left on. ENERGY STAR®, a voluntary labeling program jointly established by EPA and the U.S. Department of Energy, addresses this problem by identifying computers and photocopiers (in addition to numerous household appliances) designed to automatically power down after a period of inactivity. Typical ENERGY STAR®-labeled computers or imaging devices can reduce energy use by 50 percent, although they cost no more than their traditional counterparts. This energy savings can add up to significant dollar savings for businesses over the lifetime of these products. For more information about savings associated with these and other ENERGY STAR®-labeled products or to find out where to purchase specific items, please consult the ENERGY STAR® Web site at www.energystar.gov.

Due to rapid advances in technology, many organizations frequently replace computers and peripherals. Organizations can lengthen the lifespan of computers by requesting that vendors provide easily upgradable systems

with modular components and easily expandable memory. Leasing equipment or requiring the vendor to take back used equipment are additional options your organization may wish to explore. Organizations purchasing new computers and peripherals may also request that manufacturers use recycled and/or recyclable materials, or less packaging. For example, bidders on computer contracts with the **Commonwealth of Massachusetts** receive points on the commonwealth's product evaluation scorecard for meeting desirable environmental criteria in their computers and computer packaging. Packaging criteria include recycled-content packaging, packaging return programs, and minimal polystyrene use. Other computer criteria include reduced toxics use and design for recycling.

To help close the recycling loop and save money, organizations can also purchase remanufactured or refurbished computers. For information on alternative and disposal options for your organization's end-of-life electronics equipment, please consult the *WasteWise Update: Electronics Reuse and Recycling*.

Greening Buildings

Construction and renovation projects offer organizations an excellent opportunity to incorporate a range of environmentally sustainable features into their buildings. Many traditional construction materials are manufactured using non-renewable resources. Paints, adhesives, and sealants may contain highly volatile compounds that can pose threats to human health. By using environmentally preferable alternatives for these products, organizations constructing new facilities or renovating existing sites can implement goals to conserve limited natural resources.

Most green building materials perform comparably to their traditional counterparts and all are subjected to the same government safety standards. Many organizations have incorporated environmentally sensitive features into building design, construction, and renovation by using:

- Less toxic adhesives, cements, and sealants.
- Flooring made from renewable resources, including bamboo, cork, wool, linoleum, and sisal or carpeting made from recycled plastic bottles.
- Recycled-content lumber, wallboard, drywall, and insulation.
- Energy-efficient lighting and natural light.
- Alternative fuel sources.
- Low-flow bathroom fixtures.
- Recycled-content traffic control products and playground equipment.
- Recycled or less toxic paint.
- Furniture made from recycled-content or environmentally sustainable components.

The **Department of Natural Resources in King County, Washington**, considered environmental quality, resource efficiency, and indoor air quality when it began construction of its eight-story King Street Center in Seattle, Washington, in 1998.

Through assistance from the Seattle Light and Design Lab, the county installed a lighting system that used only 66 percent of the energy allowed under building code.

In an example of alternative power sources, the **EPA Region 9** laboratory in Richmond, California, is powered using energy obtained from a local landfill gas plant. EPA is buying wind energy for its Golden, Colorado, laboratory and has contracted for green electricity purchases in Washington State, Massachusetts, and Ohio.

If your organization is interested in pursuing specific green construction or renovation goals, the next issue of the *WasteWise Update* will focus on green buildings. Additional guidance is available online using King County, Washington's green construction page at <www.metrokc.gov/procure/green/const.htm>.



Assessing Your EPP Program

After implementing your EPP program, you need a way to measure your success.

Start by reviewing the goals and objectives outlined in your EPP policy. What were some of the goals that your organization hoped to accomplish? You might have very specific goals, such as reduced spending on hazardous materials, or more general goals, such as amount of recycled products purchased.

The following guidelines are designed to help you think about ways to assess your program, but the list is not comprehensive. It is more likely that you will discover alternative metrics that work better for you and your organization. Tracking your progress before and after you implement your program is an important part of the assessment process and the key to measuring your success. Assessing your program will enable you to provide documented results to staff members and management about the benefits of your EPP program, and it will give you opportunities to revise and strengthen your goals.

Cost Savings

Savings can be found by looking beyond the initial cost of a product or procedural change and examining the savings that will result from reduced material handling, pollution abatement, avoided disposal costs, or energy and water conservation measures. PSEG saved more than \$2 million by streamlining its purchasing process and reducing the number of its chemical suppliers from more than 270 to only 9. The new system allows PSEG to avoid excess inventory and drastically reduces disposal costs for outdated or unnecessary chemicals. Likewise, DaimlerChrysler saved almost \$45 million by tracking and screening all chemical purchases, reducing the number of plastic resins purchased, substituting less hazardous chemicals when possible, and investing in energy-saving measures.

Improved Worker Health and Safety

Minimizing employee contact with hazardous products, such as chemicals or cleaning supplies, not only creates a safer working environment, but also improves employee health. Tracking sick leave records, worker compensation claims, accident rates, and changes in employee productivity are possible evaluation measures. Since implementing an environmentally preferable cleaning products program, Yellowstone National Park has noticed a significant increase in the morale of custodial workers exposed to the products on a daily basis. Using new cleaners, the employees no longer report the dizziness, nausea, and watery eyes that they frequently experienced in the past. Since the project was initiated, 22 other National Parks have followed Yellowstone's lead.



Product Attributes

Assessing the environmental attributes of your purchases will depend on the goals of your organization. For example, if your organization decides to concentrate on a single attribute such as recycled-content purchases, a simple database or spreadsheet will work for tracking your purchases. PSEG works with its vendors to track the attributes, quantities, and amount spent on its purchases. Through an agreement with its primary office products supplier, Boise Cascade, PSEG receives customized catalogs that provide information on the recycled content and postconsumer content of all products. Each year, Boise Cascade increases the number of recycled-content products it offers. Additionally, the vendor maintains records of the products PSEG purchases, the quantities it purchases, and the total amount it spends, allowing PSEG to track its annual usage of recycled-content products.

As your program grows and your goals expand into multiple attributes or lifecycle analysis, your method of measurement is likely to change. You will need to quantify the environmental benefits of your products based on the goals that your EPP team established during the development phase. For example, you could measure reductions in natural gas consumption as a result of energy-efficiency projects or the decreased purchases of products containing VOCs. DaimlerChrysler evaluates its purchases on multiple environmental attributes—including toxicity, chemical exposure, and release—and recyclability, in addition to cost and performance factors. The company conducts a lifecycle cost analysis of the products it purchases, maintaining databases with information on more than 800,000 components and products. When a product has been identified as preferable based on the lifecycle analysis, the database ensures that the preferred product is purchased.

Resource Conservation

If you are focusing on conserving water or energy, compare your water, sewer, fuel, or electricity bills from before you implemented conservation practices with those after. Not only will this demonstrate whether your efforts are successful, the information can be used to increase awareness of the need to conserve water and energy throughout the company.

Reduced Consumption of Chemicals

One possible way to measure your consumption of chemicals is to keep a database that tracks your organization's use of hazardous chemicals. In its *Green Procurement Standards*, Canon USA, Inc., includes lists of more than 300 chemicals that are used in routine facility operations or that remain in its products. Canon has prohibited the use of many of the chemicals and strives to reduce the use of all chemicals on the lists. You can build your own database by obtaining copies of the material safety data sheets (MSDSs) for the chemical products

you purchase. MSDSs provide information about the manufacturer, hazardous substance content, first aid emergency procedures, personal protection, and special precautions.

Promoting EPP

It is important for your organization to promote its EPP programs both internally and externally. Internal promotion will educate staff and management about the benefits of EPP and foster organizational support for your program. External promotion publicly demonstrates your organization's commitment to the environment and advertises its actions.

Herman Miller publishes its environmental goals in its Environmental Report, highlights them on the Web site, and distributes them to customers. As well as informing the public of the company's initiatives, this publicity allows employees to take pride in the company's environmental stewardship.

External Promotion

- Display the environmental attributes of the products you buy and sell.
- Circulate a letter to each supplier about your environmental goals and objectives.
- Organize vendor fairs for environmentally friendly products.
- Donate environmentally preferable products to local charities and nonprofit organizations.
- Provide information about your EPP program on your Web site.

Internal Promotion

- Host green purchasing workshops/training sessions for employees.
- Invite vendors to demonstrate environmentally friendly products.
- Include environmental performance as part of the annual reviews.
- Offer staff bonuses.
- Sponsor competitions between departments.
- Disseminate information through e-mails and newsletters.

It is important that vendors making environmental claims take heed of the Federal Trade Commission's "Green Guides," located at <www.ftc.gov/opa/opa/predawn/F93/greenguid3.htm>



R e s o u r c e s

for Environmentally Preferable Purchasing



▼ **EPA's Environmentally Preferable Purchasing Program Web Site**

<www.epa.gov/oppt/epp>

Includes EPA's guidance on EPP, descriptions of federal pilot projects, and tools and resources—including the EPP database, collections of case studies, and electronic copies of the *EPP Update*.

EPP Update

<www.epa.gov/opptintr/epp/docupdates.htm>

EPA's semi-annual newsletter on EPP program activities. Issues of this publication are available online.

EPP Database

<<http://notes.erg.com>>

Contains information on more than 600 products and services. It provides links to contract language and specifications created and used by federal and state governments and others to buy environmentally preferable products and services.

▼ **EPPNET**

<www.nerc.org/eppnet.html>

The Northeast Recycling Council (NERC) established the EPPNET list server to link federal, state, local, and private procurement and environmental officials. Potential participants must first register for approval.

▼ **Hospitals for a Healthy Environment (H2E) Environmentally Preferable Purchasing Guide**

<www.geocities.com/EPP_how_to_guide/>

While aimed at hospitals, the principles and steps in this EPP guide are applicable to any type of organization. This Web site is a cooperative project of the U.S. EPA and the American Hospital Association.

▼ **National Pollution Prevention Roundtable (NPPR) EPP Discussion Group**

<www.p2.org/workgroup/epp/>

The EPP Discussion Group was formed in 1999 to promote networking and communication among people practicing EPP and people interested in learning about EPP; minimize duplication of effort on EPP issues through increased communication; and serve as a resource to NPPR members interested in EPP.

▼ **Pacific Northwest National Laboratory EPP Training Slide Presentation**

<www.pnl.gov/esp/greenguide/tutorial/sld001.htm>

Though focusing on purchasing requirements set forth by E.O. 13101 for federal agencies, this site provides an online, printable slide presentation on EPP that can be used by any organization.

▼ **The Environmentally Preferable Purchasing Guide**

<www.swmcb.org/EPPG/1_1.htm>

Published by the Solid Waste Management Coordinating Board, a group consisting of six metropolitan counties in Minnesota, this online EPP

guide is aimed at government and school purchasers. The guide reviews more than 30 product areas, providing information on cost, performance, specifications, and availability.

▼ **King County, Washington Environmental Purchasing Program**

<www.metrokc.gov/procure/green/>

King County's Web site provides a history of the county's EPP policies, descriptions of its experience with various environmentally preferable products, bid and contract specifications, and local vendor information.

▼ **Massachusetts Environmentally Preferable Products Procurement**

<www.state.ma.us/osd/enviro/enviro.htm>

The Commonwealth of Massachusetts is one of the first states in the country to initiate an EPP program. Its Web site includes state EPP policies and regulations, bid and contract specifications, and product information and experience.

▼ **Minnesota Materials Management Division Environmentally Responsible Purchasing**

<www.mmd.admin.state.mn.us/envir.htm>

Provides new updates on various products available to state agencies, lists environmentally responsible products and services available, highlights state legislative and executive order requirements, and includes an electronic version of the state's biennial report on EPP.

▼
**City of Santa Monica's
 Purchasing Policy**

<<http://www.ci.santa-monica.ca.us/environment/policy/purchasing/>>

Provides criteria for procuring products and services, negotiating contracts and bid specifications, and complying with city ordinances through environmentally preferable purchasing.

▼
**Office of the Federal
 Environmental Executive**

<www.ofee.gov>

The Office of the Federal Environmental Executive serves to implement E.O. 13101, which is designed to further expand and strengthen the federal government's commitment to recycling and buying recycled-content and environmentally preferable products. The Web site contains various reports and resources.

▼
**U.S. Department of Energy's
 Federal Energy Management
 Program (FEMP)**

<www.eren.doe.gov/femp/>

FEMP seeks to help government agencies reduce energy and water use, manage utility costs, and promote renewable energy. This Web site provides information about the program's mission, technical assistance resources, and documents highlighting program success stories.



To order hard copies of these publications (except WasteWise Updates), contact The Pollution Prevention Information

Clearinghouse at 202 260-1023 or by e-mail: ppic@epa.gov. The following documents also are available online at <www.epa.gov/opptintr/epp/doccase.htm>

▼
**Federal Pioneers:
 Environmentally Preferable
 Purchasing Stories from the
 Federal Government.**

EPA 742-F-00-008. September 2000.

Includes case studies on 27 successful applications of EPP in the federal government. The examples include everything from photocopiers to custodial services. They are from a diverse group of agencies—from the Department of Interior to the Navy—demonstrating the different ways EPP can be applied and providing models for other federal purchasers.

▼
Private Sector Pioneers Report.

EPA742-R-99/001. June 1999.

Highlights the EPP efforts of 18 private companies. Besides expanding the market of green products, many of the companies in the report are preventing pollution and saving millions of dollars through EPP.

▼
**State and Local Government
 Pioneers: How State and
 Local Governments Are
 Implementing
 Environmentally Preferable
 Purchasing Practices.**

EPA742-R-00/004. November 2000.

Illustrates how more than 40 state and local governments are implementing EPP. The study shows that green purchasing is expanding beyond recycled content products to include many other environmental attributes such as chlorine-free, reduced volatile organic compounds (VOC) content, use of alternative fuels, and reduced product packaging.

▼
**Green Spending: A Case
 Study of Massachusetts'
 Environmental Purchasing
 Program.**

EPA742-R-98/002. August 1998.

Highlights the unique approach taken by the Commonwealth of Massachusetts in its environmental purchasing program. The commonwealth's proactive decisions regarding environmental purchasing have made the state a leader among state governments in EPP.

▼
**The City of Santa Monica's
 Environmentally Preferable
 Purchasing Efforts.**

EPA742-R-98/001. January 1998.

Examines how the City of Santa Monica, California, adapted its purchasing policies to begin buying environmentally preferable products and services.

▼
Cleaning Products Pilot Project.

EPA/742/R-97/002. February 1997.

Documents the collaborative effort between the U.S. General Services Administration (GSA) and the EPA to develop a framework for identifying and comparing environmentally preferable commercial cleaning products.

▼
**Leading by Example: How EPA
 Incorporated Environmental
 Features into New Buildings.**

EPA742-R-98/001. January 1998.

Provides two case studies to demonstrate how large building projects can cost-effectively incorporate environmental features, while also addressing the concerns unique to each site. The case studies describe how EPA balanced function, cost, and environmental impact while designing and constructing two new EPA facilities.

▼
**Defending the Environment at
 the Department of Defense.**

EPA742-R-99/002. July 1999.

Documents how the U.S. Department of Defense (DOD) introduced EPP into routine renovations of the Pentagon and several other DOD facilities. In the

course of this project, DOD assessed the environmental performance of more than 300 construction products.

▼
Painting the Town Green: The Aberdeen Proving Ground Paint Pilot Project.

EPA742-R-99/005. November 1999.

Documents a pilot project to reduce the number, volume, and environmental effects of the paints used at Aberdeen Proving Ground. Aberdeen contracted with Green Seal to help identify the environmental attributes relevant to paint and then established environmentally preferable paint standards.

▼
Paving the Road to Success: The Department of Defense's Parking Lot Repair and Maintenance Contract: An Environmentally Preferable Purchasing Case Study.

EPA742-R-96/007. December 1997.

Describes in detail how the Department of Defense evaluated and purchased environmentally preferable products to repair and maintain parking lots. The EPP pilot project involved specifying baseline environmental attributes of paving products and

developing innovative contract language to encourage the contractor to go beyond those baselines.

▼
WasteWise Updates

All past issues of the WasteWise Update can be downloaded from the publications page of the WasteWise Web site <www.epa.gov/wastewise>. Some topics most relevant to EPP are Remanufactured Products, Closing the Loop, Building Supplier Relationships, Extended Product Responsibility, and Electronics Reuse and Recycling.

▼
GreenSeal Choose Green Reports

<www.doi.gov/oepc/gseal.html>

These monthly reports closely examine environmentally responsible products and services and compares their attributes among manufacturers and sources.

▼
EPA and DOE's ENERGYSTAR® Program

<www.energystar.gov>

EPA and DOE's voluntary labeling program is designed to identify and promote energy-efficient products.

▼
EPA's Comprehensive Procurement Guidelines (CPG)

<www.epa.gov/cpg>

EPA's CPG Web site contains information on buying recycled-content products in categories including office products, paper products, construction products, and transportation products. Fact sheets provide information on EPA-designated recycled-content products; recycled-content recommendations; case studies from around the country; and key resources, associations, and Web sites.

▼
Chlorine Free Products Association

<www.chlorinefreeproducts.org>

This trade association represents companies dedicated to implementing advanced technologies and groups supporting products free of chlorine.

▼
Oikos Green Buildings Source

<<http://oikos.com/index.lasso>>

A database of green building products that features special "products of the month."

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