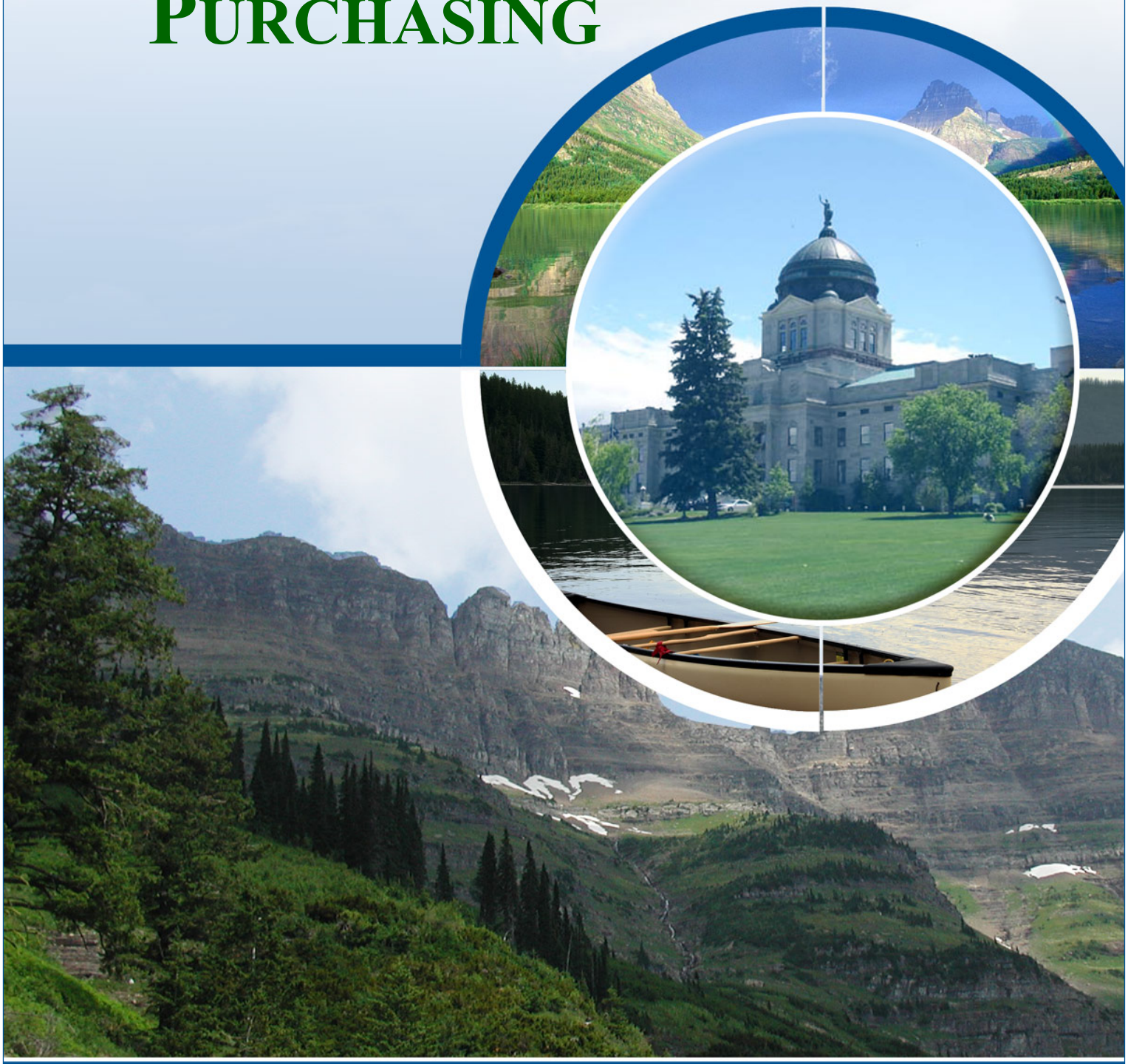
RESPONSIBLE PURCHASING



A Resource Guide for Montana Employees

TABLE OF CONTENTS

ACRONYM	TERM
AFV	Alternative Fuel Vehicles
CPG	Comprehensive Procurement Guidelines
DEQ	Department of Environmental Quality
DOA	Department of Administration
DOE	Department of Energy
DSP	Declaration of Surplus Property
EMS	Environmental Management System
EPA	Environmental Protection Agency
EPAct	Energy Policy Act
EPEAT	Electronic Environmental Assessment Tool
EPP	Environmentally Preferable Products
FEMP	Federal Energy Management Program
GHP	Green Highways Partnership
LEED	Leadership in Energy and Environmental Design
MOM	Montana Operators Manual
RCRA	Resource Conservation and Recovery Act
RFP	Request for Proposal
RMAN	Recovered Material Advisory Notice
RPN	Responsible Purchasing Network
SPB	State Procurement Bureau

I. Introduction

The State of Montana, Department of Environmental Quality, has produced this guide to support and assist those employees who purchase goods on behalf of the state. The guide provides information and contacts for the purchase of goods that are designed to better protect our personal health, as well as Montana's natural resources. Written for both purchasing professionals and program staff, this guide summarizes the legal basis for targeting "green" products, the systems currently in place for purchasing such products, and tools for locating and identifying "preferred" products with lower toxicity levels which help reduce impacts to the environment. The guide is meant to provide additional information and resources to help state employees comply with state law while demanding and purchasing products which improve personal health, as well as the health of natural resources, such as cleaner air and water.

Chapter II explains the legal basis for Montana's "green" purchasing efforts, as well as the many valuable reasons to include environmental considerations when making purchasing decisions.

Chapter III discusses key federal government programs to "green government" and highlights those which require state compliance.

Chapter IV reviews Montana's current "green" purchasing system through our term contracts, Central Stores, and surplus property sales and auctions. Many of our resources are easily accessible online, as shown in the box below.

Chapter V provides a general overview of the process for including sustainable or "green" requirements in solicitations; and writing or revising specifications for products that are "sustainable". There are also suggested techniques to incorporate within the bidding process that allow for evaluating and scoring bid responses against 'sustainable' criteria as well as price when determining bid winners.

Chapter VI discusses how to evaluate and measure green purchasing efforts.

Fact Sheets

Fact sheets and best practice examples are appended at the conclusion of this guide. The Fact Sheets and Guide were developed by Region 8 of the U.S. Environmental Protection Agency (EPA). The Fact Sheets cover the following key areas of sustainability:

- Environmentally preferable procurement (EPP)
- Waste prevention and recycling
- Water conservation
- Fleet/Transportation management
- Energy efficiency and renewable energy
- Environmental leadership

The Montana Department of Environmental Quality thanks U.S. EPA Region 8 for its support in developing this guide. We hope it will help our state continue to improve its environmental performance within state government.

State of Montana Web Resources for Green Purchasing

- **Montana Green Responsible Purchasing Web Sector:** www.greenpurchasing.mt.gov
  Serves as a clearing house for helpful information that explains where, how, and why to "buy green" in Montana. The site contains a link to an energy, resource, and cost savings calculator to illustrate how green purchasing helps protect the environment meanwhile saving agencies money.
- **Sustainable Operations in State Government:** www.greenpurchasing.mt.gov
  Lists of current sustainable activities employed by Montana agencies. Links to pages that provide details about these activities, how they are carried out successfully, and why they benefit Montana's environment.
- **State Procurement Services:** http://gsd.mt.gov
  Provides a one-stop shop for state purchasers. The site provides procurement forms and contract language, offers lists of approved vendors, and links to Montana laws and statutes related to procurement. This site also links to Montana's Central Stores Program.
- **Reducing, Reusing, and Recycling in State Government:** www.greenpurchasing.mt.gov
  Provides information on how to reduce environmental impacts and promote sustainability in government. The site offers guidance on green purchasing, source reduction, energy conservation, and recycling, in addition to quick tips for reducing individuals' daily impacts on the environment.
- **Surplus Property Programs:** http://gsd.mt.gov/agency/statefederalsurplusprogram.asp
  Offers state agencies a way to surplus their unused property. The site provides an online form for submitting a Declaration of Surplus Property (DSP) to the Property and Supply Bureau. Also listed are benefits of returning agency surplus and for recycling certain materials such as scrap metal.
- **Surplus Property Public Auction:** http://www.publicsurplus.com/sms/state,mt/browse/home
  Allows members of the public to purchase state surplus property, including SUVs, cars, pickups, trailers, miscellaneous items, and heavy equipment. Items are continually added to the online auction site, allowing for state surplus to be reused by citizens rather than stored or thrown away.

Reference Sheets

Reference sheets developed by the Montana Department of Environmental Quality are available separately and online. The "Reference Sheets" provide additional information and tips for procurement professionals within Montana, and cover:

- Alternative Fuels and Alternative Vehicles
- Purchasing and Recycling Printer Cartridges
- Developing "Green" Leases for Existing Rental Agreements
- Electronics Purchasing and Recycling
- Planning "Green" Meetings
- Sustainable Food Procurement (Supporting local producers)
- Purchasing Recycled-Content Paper (explains requirements under state law)
- Universal Waste Management
- Quick Guide to E-way Online Shopping

www.greenpurchasing.mt.gov

II. Why Buy "Responsibly"? Why Buy "Green"?

"Green purchasing" encompasses more than just buying recycled-content pens and paper, or specifying the use of pulverized glass as an aggregate in paving projects. Both of these actions fulfill the intent of State law, which is for state government to support Montana's recycling infrastructure by closing the loop and buying recycled-content products.

Green purchasing" has evolved into "Responsible Purchasing" and now involves much more than recycled-content. Consumers are realizing that they can demand products that are free of toxic or hazardous ingredients, and that are manufactured in a sustainable manner which reduces impacts to natural resources. An abundance of tools exist to find and identify products that protect our personal health, as well as the health of the natural resources we rely upon.

Responsible purchasing decisions based upon what, and where, we spend tax dollars is an important practice for protecting Montana's precious natural resources and environmental quality. Purchasing green products and services helps conserve water, save energy, conserve natural resources, preserve landfill space, protect wildlife habitat, and prevent pollution. Recognizing the environmental significance of "buying green," and the state government's purchasing power and influence over state recycling markets, Montana actively promotes and supports green purchasing practices.

Montana Laws and Regulations Mandating Green Purchasing

Montana State Constitution

Under *Article II: Declaration of Rights, Section 3* of the Montana State Constitution, "…all people have an inalienable right to a clean and healthful environment." In addition, *Article IX: The Environment and Natural Resources, Section I* declares that "The state and each person shall maintain and improve a clean and healthful environment in Montana for present and future generations." *Section I* also directs the legislature to provide adequate remedies for the protection of the environmental life support system from natural resource degradation.

State Statutes and Policies

Montana Statute 75-10-803: Solid waste reduction goal and targets states that Montana's goal is to reduce, through source reduction, reuse, recycling, and composting, the amount of solid waste that is generated by households, businesses, and governments and that it is either disposed of in landfills or burned in an incinerator, as defined in State Statute #75-2-103.

"What is Post-Consumer Recycled-Content?"

A **Post-Consumer Recycled-Content** product specifies that a certain percentage of the raw material(s) comprising the product were processed from goods previously used and recycled by citizens.

In contrast, a **Pre-Consumer Recycling** label indicates that scraps, waste products, shavings and similar materials which were created during the manufacturing process can be returned to be "recycled."

The difference between the terms is generally not indicated, although the labels may say, "contains recycled content."

Montana Statute 75-10-806: State government procurement of recycled supplies and materials directs the Department of Administration (DOA) to write purchasing specifications requiring the acquisition of materials and supplies made from recycled elements if the use is "technologically practical and reasonably cost-effective." The statute names several products which now are commonly available with post-consumer content, such as oil, tires, and plastic. The statute includes specific directives to state agencies, universities and the legislature on the purchase of paper and paper products. The statute establishes a goal for all state agencies to purchase up to 95% of their paper products with the maximum amount of post-consumer recycled-content possible.

Montana Statute 18-4-132 Exempts from competitive bidding Montana-produced food and allows government bodies to spend public funds on food that is produced, processed, or manufactured here in Montana. Now government institutions, including schools, universities, and state agencies have greater flexibility to purchase Montana-produced foods by direct purchase or while following standard procurement procedures.

Montana-produced food products may be procured by direct purchase when the quality and availability is substantially equivalent to the quality and availability of similar food products produced outside the state. Standard procurement through contracts can occur when bid responses do not exceed or reasonably exceed the lowest bid or price quoted for similar food products produced outside the state. The person lawfully responsible to purchase food products for a governmental body has discretion to choose a higher bid when the higher cost is reasonable and capable of being paid out of that governmental body's existing budget without seeking additional funds or spending authority.

Governor Schweitzer's 10x20 Energy Initiative (per memo of January 15, 2008)

The 10x20 Energy Initiative directs state agencies to, "Lead by example to make smart decisions and changes in state government to address climate change." To accomplish this goal, the governor directs agencies to implement the tasks outlined in a memo written January 15, 2008, by DOA and the Department of Environmental Quality (DEQ). This memo includes energy savings recommendations and asks state agencies to buy green products.

Purchasing "Responsibly" means buying products that:

- Reduce indoor air pollution
- Have reduced impacts to water and land resources
- Contain fewer hazardous ingredients
- Are reusable or recyclable

Montana Integrated Waste Management Act

The Montana Integrated Waste Management Act (75-10-803 MCA), directs the state to reduce the volume of solid waste that is either disposed of in landfills or incinerated. The Act also describes a strategy for integrated solid waste management and sets targets for increasing rates of recycling and composting in Montana.

Montana Operations Manual - Procurement Procedures

Section 1-0706.00 of the Montana Operations Manual (MOM) discusses the state's commitment to purchasing environmentally preferable (EPP) products, including energy efficient products qualified under EPA's ENERGY STAR® program. The State Procurement Bureau (SPB) works with state agencies to incorporate ENERGY STAR specifications into the agencies' solicitations. SPB actively seeks to expand EPP considerations into more state procurement practices, and recently added requirements for EPEAT-rated products into term contracts for computer equipment.

Purchasing "Responsibly" Benefits Montana's Economy and Natural Resources

The legislature created the "green purchasing law" (75-10-806 M.C.A.) to help protect Montana's water, air, energy, and land resources. The legislature directed state agencies to support Montana's recycling infrastructure by increasing demand for the end products of recycling. The legislature meant to drive the demand for recycled paper products when recommending that state agencies and universities purchase up to 95% of all paper products with post-consumer recycled-content.

Recycling paper is just one step in the recycling process; demand for the collected recyclables is created when we "close the loop" and complete the recycling process by purchasing products made from recycled materials. By purchasing recycled-content, water efficient, energy saving, or biobased products, state purchasers set an example of environmental stewardship for all of Montana's communities.

The Benefits of Buying Recycled-content Products

Beyond the obvious benefits of recycling, such as reducing dependence on virgin raw materials and putting valuable materials back into the economy, recycling also conserves landfill space while protecting land and water resources. Purchasing recycled-content products creates demand for the recyclables being kept from the landfill.

Products created with recycled-content also contribute to savings in energy and reduced pollution during the manufacturing process.

The Benefits of Buying Energy-Efficient Products

Rising energy prices, increased volatility in energy markets, and growing concerns about national energy security underscores the need to conserve and use energy wisely. The State Procurement Bureau has included specifications for Energy Star® equipment in some term contracts already, and encourages agencies to purchase energy-efficient equipment when possible. The Energy Star® program makes it easy to recognize energy-efficient products.

The Benefits of Buying Water-Efficient Products

Montanans have conserved water for generations, well-aware of the value of water and the importance of an abundant and clean source. As the population of Montana grows, so does the need to protect and conserve precious water resources. The WaterSense® program and logo makes it easy to identify shower heads, toilets, even irrigation control technologies that conserve water.

The Benefits of Buying Biobased Products

Biobased products have a more benign effect on the environment, are biodegradable, and have lower disposal and cleanup costs than the fossil fuel-based products they replace. In addition, purchasing biofuels such as ethanol support Montana's economy and creates demand for the oilseeds grown by Montana farmers. The federal government's Biopreferred Program maintains a catalog of products ranging from cleaning products and construction material to biobased plastics and lubricants. Go to www.biopreferred.gov to find products you can request through Central Stores, or find elsewhere.

The Benefits of Buying EPEAT®

Reducing exposure to harmful chemicals has become a priority for the EPA. The EPEAT® program was created as an incentive to encourage manufacturers to begin creating computers containing fewer hazardous components and toxic materials, as well as a diverse range of other criteria and options which reduce environmental impacts from electronic products. The list of participants has grown to include 40 countries with 33 manufacturers participating. EPEAT® is being expanded to include printers, copiers and other common electronic equipment. For now, EPEAT®-rated computer equipment is included in all state term contracts for Information Technology equipment.

III. Federal Programs and "Greening Government" Resources

Certain laws and executive orders direct federal agencies to purchase "green" products and state employees can take advantage of the tools and resources available to federal purchasers. Helpful catalogs of recycled-content or biobased products are available, as well as other factsheets and references. Two federal procurement mandates also include requirements for state and local governments which use appropriated federal funds. The Comprehensive Procurement Guidelines (CPG) and the Energy Policy Act (EPAct) contain certain requirements for state or local governments based upon an item's value, or the volume purchased.

***RCRA 6002:* The Comprehensive Procurement Guidelines (CPG)** specifies requirements for purchasing recycled-content products. Issued under the Resource Conservation and Recovery Act (RCRA) CPG requirements apply to federal, state, and local governments that use $10,000 or more of appropriated federal funds to purchase a designated item. These "procuring agencies" must follow CPG guidelines for the preferential purchasing of EPA designated products made with recycled material. The EPA issues guidance in a "Recovered Material Advisory Notice (RMAN)" on designated items that are generally available at competitive prices and perform as intended.

Even if CPG requirements do not officially apply, federal, state, and local governments should support recycling by purchasing products made with recovered materials whenever feasible in order to increase the demand for these products. EPA maintains the following Web site, which includes a supplier database, <www.epa.gov/cpg>.

EPAct 1992 and EPAct 2005: The Energy Policy Act of 1992 (EPAct) requires 75 percent of light-duty vehicles acquired in covered fleets to be alternative fuel vehicles (AFVs). The Energy Policy Act of 2005 amended EPAct 1992 to require all dedicated and dual-fuel AFVs in covered federal fleets to use alternative fuels at all times.

State government fleets that operate, lease, or control 50 or more light-duty vehicles are covered under the Federal EPAct. Fleets that are subject to AFV acquisition requirements may comply by acquiring new or used AFVs, purchasing credits from other covered fleets, or using credits they have earned. They may also purchase biodiesel fuel blends of 20 percent biodiesel or greater, or acquire conventionally fueled vehicles and have them converted within four months of purchase.

Exemptions are provided to fleets if the AFVs that meet their business needs are not available or if alternative fuel supplies are not available. Certain vehicles, such as emergency and non-road vehicles, do not count toward a fleet's annual light-duty vehicle count and are excluded from EPAct. See the EPAct State and Alternative Fuel Provider Rule at http://www1.eere.energy.gov/vehiclesandfuels/epact/fleet_coverage_compliance.html

Farm Bill: The Farm Security and Rural Investment Act (FSRIA) authorized the U.S. Department of Agriculture Biopreferred Program. While there are no flow-down purchasing requirements to states, this program serves as a comprehensive reference for state agencies interested in purchasing biobased products.

The Biopreferred Program Website provides a product catalog for agencies that covers a wide array of products, including building materials, lubricants, bioplastics, construction materials, and cleaning products. To view a catalog or to learn about organizations that are already using the Biopreferred Program, visit http://www.biopreferred.gov.

Executive Order (EO) 13423, "Strengthening Federal Environmental, Energy, and Transportation Management": While this federal EO has no flow-down requirements for state or local governments, it serves as a strong model for greening government efforts. EO 13423 emphasizes increasing the purchases of alternative fuel vehicles and expanding purchases of environmentally sound goods and services, including biobased products.

EO 13423 also requires electronics purchases, such as computers and appliances, to meet specific standards for resource and energy efficiency. Many of these strategies for minimizing the environmental impacts of government purchases are applicable to state government purchasing. To review EO 13423 in more detail, visit < http://www.fedcenter.gov/programs/eo13423/>.

EPA Environmentally Preferable Purchasing (EPP) Guidance: EPA's EPP Guidance provides a general framework for incorporating environmental considerations into purchasing decisions. The EPP web site helps purchasers find and evaluate information about green products and services, calculate the costs and benefits of their purchasing choices, and helps manage green purchasing processes. Visit <www.epa.gov/epp>, and see the Region 8 EPP Fact Sheet in the Appendix at the end of this guide.

ENERGY STAR®: Montana State Offices spend more than $42 million a year on energy to provide public services and conduct business. By purchasing ENERGY STAR® products, which include appliances, office equipment, electronics, and heating and cooling systems, Montana state agencies can reduce energy use, conserve natural resources, and save money by purchasing products that are certified to meet specific standards for energy efficiency. ENERGY STAR® also certifies buildings that meet high standards of energy efficiency. Review energy efficient, products, services, and buildings at <www.energystar.gov>.

WaterSense®: WaterSense® is an EPA-sponsored partnership and labeling program that encourages water conservation. WaterSense® labeled products include bathroom sink faucets, landscape irrigation services, showerheads, toilets, urinals, and weather- or sensor-based irrigation control technologies.

State and local governments may partner with the EPA on WaterSense® as a way to distinguish themselves as leaders in water efficiency and to help reduce their state's water and infrastructure costs. The City of Bozeman is already a promotional partner. Learn more at <www.epa.gov/watersense/>.

EPEAT®: The Electronic Environmental Assessment Tool (EPEAT) is an easy-to-use, online tool that assists purchasers when selecting and comparing computer equipment based upon reduced environmental impacts. (By using state term contracts, purchasers do not have to search the EPEAT website to find qualified equipment. The vendors will list EPEAT®-qualified equipment that is included on state contracts.)

Government employees will find the website's **Electronics Environmental Benefits Calculator** helpful. This online calculator provides immediate feedback on the amount of pollution reduced due to the purchases made by your organization. Simply input information regarding the number of computer towers, monitors, or laptops purchased, the number that are rated bronze, silver or gold under the EPEAT® rating system, the number of items that are reused by someone else, and the number of items sent for recycling.

The EPEAT® calculator does a quick analysis and reports the amount of pollution you've saved by purchasing "green" computers. Areas analyzed include air emissions, use of hazardous and toxic ingredients, and the amount of energy saved through recycling. The information is presented in a graph form, and also by comparisons that are easily understood, such as the number of households powered by the energy saved, or the number of cars that would produce similar levels of pollution. These equivalents provide a clearer understanding of materials, money, and environmental impacts gained or lost in relation to your green purchasing program for computers. To find the Electronics Environmental Benefits Calculator, look under "Purchaser" on the EPEAT® website, <www.epeat.net>.

Greenscapes: This EPA program promotes landscaping techniques that conserve water and protect the environment by reducing the use of pesticides and fertilizers, using biobased oils for lawn equipment, and much more. There is a tool for calculating the costs of embracing a new method of landscaping. Find out more about Greenscapes at www.epa.gov/epawaste/conserve/rrr/greenscapes/index.htm

IV. Green Purchasing Through Existing Montana Programs

The State of Montana has integrated green purchasing into its existing acquisition chain. (See MOM Section 1-0740.00). The Department of Administration's Central Stores has term contracts for hundreds of green office supply products as well as other products. **Central Stores negotiates favorable pricing that saves agencies 15 to 45 percent over retail costs.**

Agencies are required to purchase office supply items from Central Stores unless the desired product is available at a lower cost from another source and conforms in all material respects to the terms, conditions, and quality offered by the Central Stores Program.

Excluded and Optional Items
Some items, such as computers, printers, video equipment and some software are excluded from Central Stores and agencies will find separate term contracts for those items. Other items such as lightbulbs, toner cartridges, and office machines such as typewriters, Fax machines and more, are Optional Purchases. State agencies are not required to purchase these items from Central Stores but may find it is less expensive to do so. Look for additional information on these products and Frequently Asked Questions on Montana's E-way home page. (www.e-way.com)

Find more on Montana's Term Contracts at www.gsd.mt.gov/ProcurementServices/default.mcpx.

Montana also reuses and recycles surplus equipment and supplies through an online surplus property auctioning program and direct sale of surplus items.

Montana Central Stores Program

Central Stores utilizes term contracts to obtain the best possible prices for more than 380 different green products. Recognize Montana-sourced supplies by the **Z49MT** prefix in front of the item number. Examples include:

- Recycled-content paper and paper products (various types, colors, sizes)
- Recycled-content tissue, towel, napkins
- Janitorial cleaning supplies and services
- Compostable food service supplies (plates, cups, bowls, utensils)
- Recycled-content office supplies (writing pads, sheet protectors, binders, sticky notes, file folders, pens)
- Solar-powered desk calculators
- Remanufactured toner cartridges
- Compostable trash can liners
- Nontoxic paint and markers
- Re-writable compact disks (CDs)
- Batteries (rechargeable and recyclable)
- Nonlatex examination gloves

The **Central Stores E-Way** online ordering system is managed by Staples and offers many products that are available for purchase , not all of which are covered by the state's term contracts,. To recognize products with the most value for Montana and the lowest prices, look for the "c$" icon **Be aware, however, that Montana's stock green items do not show up in a general search of the E-Way database.**

Three steps to finding Montana's green supply products on E-Way:

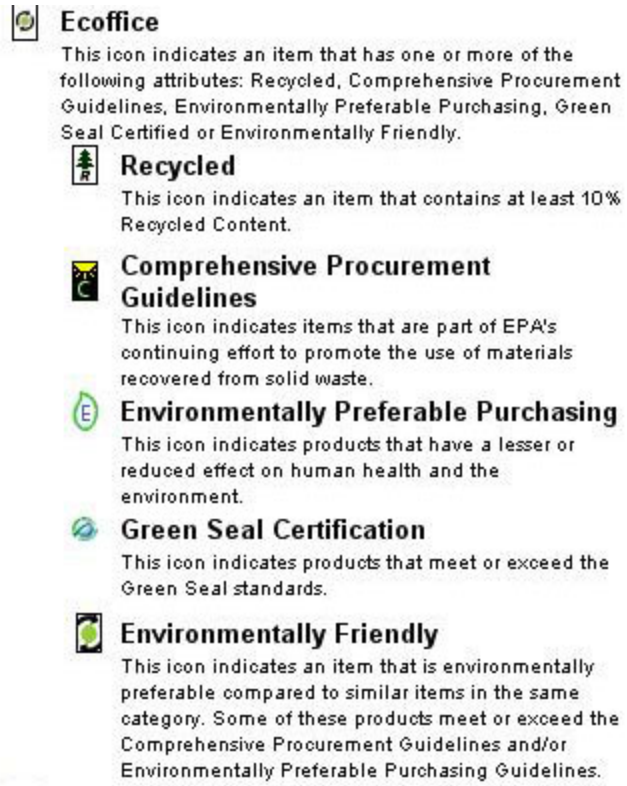
The product numbers start with "Z49MT."

- On the E-way home page, leave the "Search" field blank and click on it
- Under "Category", select "Promotional Products"
- Under "Manufacturer" select "CEXP Rocky Mountain"

Green Supplies Available Through E-Way

Montana's Central Stores contracts with Staples to maintain the E-Way online ordering system that makes hundreds of additional green products available to Montana buyers.

The following E-Way symbols designate green products:



Surplus Property Sales and Auctions

The Montana Department of Administration's Property and Supply Bureau actively encourages the reuse and recycling of surplus supplies and equipment through its State and Federal Surplus Property Programs. (See MOM Section 1-0750). The state posts a wide range of surplus items on an online auction site at <www.publicsurplus.com/sms/state,mt/browse/home?tm=m>. Interested parties can log on and bid on all items.

Montana agencies can also sell surplus property by submitting a Declaration of Surplus Property (DSP) form to the Property and Supply Bureau, either electronically to <doasurplusproperty@mt.gov> or by sending a hard copy. Once Surplus Property has received your DSP, you will be contacted to schedule a pick-up date. If you have not been contacted within five days or have other questions, contact the Property and Supply Bureau at (406) 495-6016 or (406) 495-6017. If an agency prefers to deliver the surplus property, notify the Surplus Property Bureau before delivery.

Reimbursement

Special revenue, auxiliary, or proprietary funded agencies are allowed refunds, minus the administrative fee, from the sale of surplus property. Proceeds from equipment originally purchased with general or federal funds will be deposited into the general fund.

Used Oil/Scrap Metal

State agencies throughout Montana may utilize recycling programs established for used oil and scrap metal by contacting the Property and Supply Bureau at (406) 495-6016. Please note that this recycling program is unrelated to the paper recycling program run by the General Services Division.

Hazardous Waste

Hazardous waste is not accepted by the Property and Supply Bureau.

Universal Waste

A universal waste is a hazardous waste that is managed under the universal waste rule, 40 CFR 273, which allows for simpler requirements in order to encourage recycling rather than expensive disposal in hazardous waste landfills. Such universal waste materials include but are not limited to: rechargeable batteries, certain pesticides, and mercury-containing devices such as particular thermostats and lamps. A comprehensive list of universal waste items can be found at Montana DEQ's *A Guide to Hazardous Waste and Used Oil Management in Montana*: http://deq.mt.gov/HazWaste/CD/UniversalWaste_Types_UW.htm.

Proper handling of universal waste materials is of extreme importance in order to protect the environment from potent toxins. Universal, Electronic, and Cathode Ray Tube Waste Requirements (http://deq.mt.gov/HazWaste/hazUnivWstReq.mcpx#Generator) outlines universal waste provisions and lists available service providers. The State Procurement Bureau has term contracts in place for the handling of certain universal wastes, such as mercury containing lamps. (http://gsd.mt.gov/apps/termcontracts/ContractDetail.aspx?ContractID=1373) A full list of term contracts can be found here: http://gsd.mt.gov/apps/termcontracts/default.aspx.

V. Writing Contracts for Green Supplies and Services

The Montana State Procurement Bureau actively seeks opportunities to increase the role state government has in purchasing products and services that conserve energy and natural resources, while protecting public health and saving money. State employees need only ask for specific products or desired features and both the DEQ and the Procurement Bureau will assist with drafting new language for the bidding and contracting process. Expanding the state's influence on the health and safety of equipment and supplies will require revising contracts as they come up for rebid. As a purchaser, you can increase the state's influence by reviewing current contract requirements and specifications, and finding areas to add "green" language where feasible.

Based upon your initial research, strategically select contracts that offer the best chances for "greening." These include:

- Janitorial, maintenance services
- Integrated pest management
- Landscaping and grounds maintenance
- Meeting and Conference services
- Building construction and renovation
- Lighting, and facility operations and maintenance
- Paint
- Furniture and Carpeting
- Laundry services
- Solid waste and recycling services

Supplemental "Reference Sheets," are available for the following topics:

- Alternative Fuels and Alternative Vehicles
- Purchasing and Recycling Printer Cartridges
- Developing "Green" Leases for Existing Rental Agreements
- Electronics Purchasing and Recycling
- Planning "Green" Meetings
- Sustainable Food Procurement (Supporting local producers)
- Purchasing Recycled-Content Paper (explains requirements under state law)
- Universal Waste Management
- Quick Guide to E-way Online Shopping

The "Reference Sheets" were created by DEQ to help you recognize opportunities to change current practices. Tips, resources and recommendations for products with fewer environmental and health impacts are included. The "Reference Sheets" are available in hard copy or can be found at www.greenpurchasing.mt.gov.

Procurement Guidelines The Department of Administration, has a guide for "Initiating and Navigating the Request for Proposal Process" (October 2003), as well as the Montana Operations Manual (MOM), which contains additional information on procurement procedures. These resources should be used in conjunction with this Green Purchasing Guide as you include environmental considerations, as well as price, into state contracts.

The following steps are helpful for including environmental considerations into your acquisition planning and procurement process. (Corresponding steps in Montana's general RFP Process are indicated in parenthesis):

Identify the Need and Determine if a Green Option is Available (RFP Process Step 1)

Once you have identified the need for a particular product or service, you should determine whether there is an environmentally preferable alternative that meets your performance needs. Review EPP resources to find appropriate green substitutes. The Web resources listed in the Region 8 Fact Sheets in the Appendix at the end of this guide will facilitate and streamline this research effort.

Fully involve the end users of a product or service as you initiate acquisition planning. Project managers, designers, contractors, employees, and other users of a product can be reluctant to change brands or may be unfamiliar with green products. Successful integration of this information hinges upon an understanding of end users' technical needs, gaining their buy-in at the start, and enlisting their involvement in evaluating the performance of these new products. A green product must work as well or better than the product it replaces. They must also be competitively priced. (See "Pilot Test Green Products" below).

Write Specifications and Scope of Work (RFP Process Step 2)

See Section 1-0713.20 in the MOM for specific instructions on writing specifications.

After determining that environmentally preferable options are available, you will need to develop or revise specifications and contract language to consider the environmental attributes that make the most sense and provide the best outcome for the specific procurement, keeping in mind that specifications direct purchasing decisions. Specifications must not be restrictive and should promote competition (see page 44 of the MOM). The purpose of bid specifications is to adequately describe the products and services desired so that industry understands what is needed. Industry will respond with competitive bids that meet the attributes desired, including any environmental attributes.

In multi-year procurements, structure contracts so that it is feasible to include new green products as they become available.

Performance requirements for a green product should not significantly differ from existing performance requirements. Agencies should expect and demand that green products perform as well or better than non-green alternatives. Labor needs, performance schedules, or direct costs could differ, however, depending on the product or service.

For assistance in revising contract language, use nationally recognized and respected environmental standards and specifications developed by federal agencies and third-party standards-setting organizations. (See the Region 8 EPP Fact Sheet in the Appendix for examples).

Leverage your buying power. Compel contractors and vendors to meet environmental requirements.

The EPP Database of Environmental Information for Products and Services (http://yosemite1.epa.gov/oppt/eppstand2.nsf) posts specifications and contract language successfully used by government agencies to procure a wide variety of supplies and services. Other valuable resources that provide specifications, such as those adopted by U.S. EPA's Comprehensive Procurement Guidelines (CPG), BioPreferred, ENERGY STAR®, Green Seal, and Canadian Ecologo programs, are included in the Region 8 EPP Fact Sheet in the Appendix to this guide.

As you "green" contract requirements, talk with key users about how they use the product and any problems previously experienced. Be sure to also review all "boilerplate" contract language to be sure there are no unintentional barriers to the purchase of green products (see page 46 of the MOM for information on incorporating boilerplate language).

It is best to avoid requiring specific brands; instead, describe the functional performance requirements that the product must meet. For example, you might require that a product meet certain energy or water efficiency criteria or that it is made from remanufactured parts or recycled content. If you must specify a specific brand, refer to Montana's Standard Contract Language at www.gsd.mt.gov/procurement/standardcontractlanguage.asp , and referenced on page 46 of the MOM.

It is also important to consider life-cycle costs in your requirements. In some cases, a green product might cost more upfront but save money over time because of lower maintenance requirements and higher durability.

Bid specifications also present a great opportunity to reduce packaging waste. Include specific green packaging and delivery requirements to the extent feasible. For example, if items can be distributed in bulk rather than individually wrapped (such as certain food service items and office products), include language to that effect. Require that vendors recycle pallets, if feasible.

Also, include product end-of-life considerations, where feasible, especially for items with hazardous components. Some products are designed for disassembly to facilitate recycling or remanufacture, or are biodegradable in composting operations. Some manufacturers and vendors offer take-back programs for proper recycling or disposal of their products.

Advertise a Preference for Green Products and Services to Prospective Bidders

Because green goods and services are not necessarily mainstream in all parts of the country, agencies should make an extra effort to put current and prospective bidders on notice about new green requirements. Well in advance of the time that a contract must be awarded, advertise your agency's desire for environmentally preferable goods and services. Use existing procurement channels, including the agency's Web site, pre-solicitation and sources-sought notices, vendor meetings, advertisements, workshops, and conferences. Develop lists of local, regional, and national sources of green suppliers or use the General Vendor List maintained by the General Services Division at http://gsd.mt.gov/OLBL/Default.asp.

New technologies and processes for creating sustainable products and services are continually coming into the marketplace. Invite vendors to provide information on new environmental products. Keep abreast of developments by participating in EPP blogs and other networks.

Many vendors are increasingly able to respond to the demand from both public and private customers for environmental products. This is a direct result of the increased competition among vendors as agencies have added environmental factors into their contract requirements.

It's important to get the word out internally as well, especially to employees who use agency purchasing cards and who purchase from Central Stores.

Pilot Test Green Products

Before purchasing a large quantity of a new green product, it is a good idea to run a pilot test and evaluate the results. Ask prospective bidders to submit product samples and then ask users to conduct simple onsite product performance tests.

The goal of the pilot test should be to determine if the product meets the users' technical needs and is user-friendly. Address issues raised and update specifications and contract language accordingly.

Develop Evaluation Criteria Addressing Environmental Requirements (RFP Process Steps 13-16)

Note: The information below should be used in conjunction with Montana's "RFP Evaluation Process – Instructions" found at <http://gsd.mt.gov/docs/RFPevaluation.doc> and Section 1-0723.00, "Opening and Awarding RFPs," in the General Services Division's MOM.

Environmental considerations should be included along with such traditional factors as product safety, price, performance, and availability**.** Agencies have discretion to incorporate specific attributes that are desired to reduce public health or environmental

Life-cycle Analysis in Practice

King County, Washington, has been using plastic lumber products, such as parking stops, picnic tables, and landscape timbers, as an alternative to the same products made from wood. Recycled plastic lumber currently has a higher initial cost than wood but lasts longer. When maintenance, replacement, and disposal costs are included in the analysis, recycled plastic lumber products win out.

Purchase prices of plastic lumber are expected to decrease as technology advances and demand increases, while wood prices are expected to continue to increase.

impacts from the product or service. These attributes will be considered during the evaluation of each response.

In addition to purchase price, purchasers should also analyze maintenance, depreciation, and disposal costs of a product over its life span. Two or more products might have equal performance outcomes, function similarly, and cost roughly the same; however one product may outshine the others due to increased durability, therefore lowering costs over time. A product may also be more energy-efficient, require less maintenance, produce less waste, or release fewer harmful chemicals (VOCs) into the air. All of these attributes can factor in to evaluations of products or services.

Agencies may justify a higher cost for one product after evaluating all criteria and identifying the product that best meets all of the characteristics desired in the final product or service. If environmental attributes are included in a definition of "minimum needs," paying a reasonable price premium for a "green" product might be acceptable. This would be equivalent to paying a higher price for a high quality, more durable product. A reasonable price premium might be justified because the environmental attributes of a product or service provide offsetting reductions in operating and disposal costs.

If environmental attributes are included in a definition of "minimum needs," paying a reasonable price premium for a "green" product might be acceptable.

There are many reasons why a state agency may want to consider more than price when evaluating products and services. Including environmental and health attributes in an RFP could further agency core responsibilities and initiatives.

An agency working on issues such as children's asthma, lead exposure, or indoor air pollution may want to contract for "green" cleaning products and services that reduce exposure to VOCs and promote respiratory health.

An agency promoting health and safety in the workplace may seek services or products that are created in a sustainable manner with reduced worker exposure to hazardous chemicals. These agencies may include language in an RFP that specifies products containing low amounts of volatile organic chemicals (VOCs), hazardous ingredients, or toxic chemicals. Agencies may also specify a desire for a manufactured product that go beyond compliance with OSHA regulations and has eliminated solvents, PCBs, or other hazards in order to promote increased worker health and safety.

By including life-cycle, public health, and environmental attributes as minimum needs, and appropriately weighing each criterion during evaluation, you can ensure that all bidders are on a level playing field.

When evaluating potential bidders, be cautious of "greenwashing,"—the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service.

Ask critical questions to confirm the environmental claims made by companies and require that suppliers certify that they are providing green products as specified. If necessary, conduct site visits to manufacturing facilities to verify claims. Refer to MOM Section 1-0724.00, Receipt and Inspection of Supplies, for additional information on inspecting products to ensure they meet the required specifications.

A process to verify information submitted by vendors can be included in the standard terms and conditions section of the contract, to ensure access to vendor information for auditing purposes.

OR

Require vendors to provide detailed information on green products they supply as a requirement in the RFP and contract.

VI. Green Purchasing Evaluation, Metrics, and Reporting

Your agency or sub-agency should establish measurable green purchasing goals and track progress towards their achievement. The Department of Environmental Quality created a tracking sheet in Excel that you can download from www.greenpurchasing.mt.gov. Collect data to assess the effectiveness of your efforts and justify any initial costs associated with establishing the green purchasing program.

First, identify the information you will need in order to quantify green purchasing, such as:

- Contract, purchase order, or agreement number
- Order date
- Vendor name, address, contact information
- Item description
- Environmental attribute(s) (e.g., recycled content [percentage postconsumer content], reusable, less toxic, energy efficient)
- Amount ordered
- Unit of measure (size, volume, weight)
- Unit cost
- Packaging (or lack; e.g., bulk purchasing)
- Other related costs (labor, training, electricity consumption, maintenance, disposal costs)
- Cost savings (reduced maintenance, reduced disposal costs)

Record this information for both "green" and conventional items that are functionally equivalent. Make your job even easier by requiring responsive bidders to provide this information with each order and in summary form at the end of your fiscal or calendar year.

You should also establish and maintain feedback with end users on the performance of the green products being supplied. Conduct random checks to make sure products delivered meet your green requirements.

Where possible, quantify the environmental savings achieved through green purchases. See the Region 8 EPP Fact Sheet at the end of this guide for environmental benefit calculators that are available for certain product categories.

Next, analyze, summarize, and report your green purchasing data. Analyze product performance, costs, barriers, successes, and measurable impacts (both positive and negative) on waste disposed of, recycled content, electricity use, water use, toxicity, etc. Compare baseline purchases with comparable green products purchased in each category.

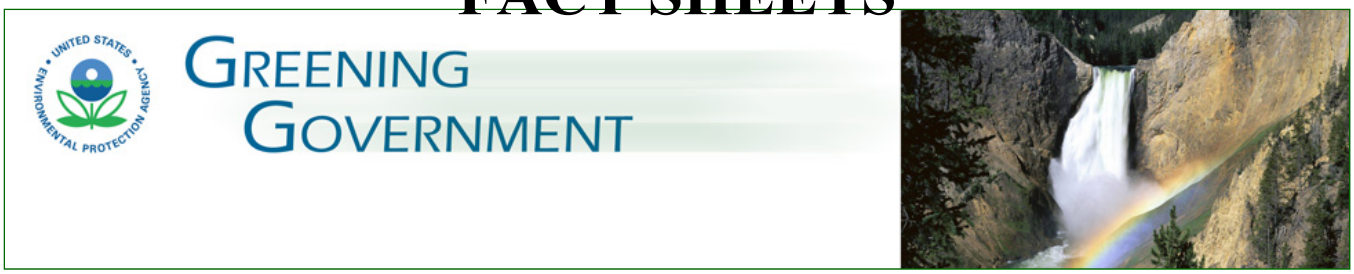
Note that changes in your agency's budget, size, or mission, and changes in market conditions can complicate year-to-year comparisons. Note any major changes in number of employees, number or size of facilities, data gaps, or other factors that will help explain major differences in purchasing trends from year to year.

This documentation will help justify the green purchasing effort and inform the public about the agency's commitment to the environment. It will also help you make necessary adjustments to your environmentally preferable purchasing program.

APPENDIX:

EPA REGION 8

FACT SHEETS



Environmentally Preferable Purchasing

EVERY PURCHASE HAS AN IMPACT ON HUMAN HEALTH AND THE ENVIRONMENT. Environmentally preferable purchasing (EPP) strives to purchase goods and services that have lesser or reduced impacts, when compared with competing products or services that serve the same purpose.

Best Management Practices

1. **Adopt an affirmative procurement policy** requiring agency personnel to increase acquisition of EPP products and services to the extent feasible, consistent with price, performance, availability, and safety considerations. Success requires full participation from those making purchasing decisions, so it is important to obtain support from senior management as well as program and acquisition personnel.
2. **Dedicate resources for green purchasing**. The most successful green purchasing programs have dedicated, trained staff with expertise in the many technical, legal, financial, and practical areas associated with greening the government. These EPP experts can conduct research, provide technical assistance, compile and share best practices, develop and conduct training programs, stay abreast of new products and constantly evolve standards and specifications, identify sources of supply, assist with revising contract language, help develop evaluation criteria, assist in evaluating bids, and monitor and report on the agency's EPP program.
3. **Establish an electronic purchasing infrastructure**. Establish and maintain a Web-based standard purchasing system to minimize the generation of paper waste.
4. **Assess your current purchasing habits and procedures**. Examine purchasing procedures manuals and guidance documents, forms, standard clauses and conditions, and other contract language to determine how and where they need to be modified to incorporate green considerations.
5. **Determine benchmarks**. Examine a year's worth of purchasing records to identify products commonly purchased in large amounts, in terms of units, volume, or weight. Examine service contracts to do the same. Dollar volume can also be used, although price fluctuations make it difficult to accurately measure progress from year to year or to quantify the environmental benefits of green purchasing activities.
6. **Establish priorities and quantifiable goals**. If your agency is starting from zero, start with "low hanging fruit" such as paper, office products, and janitorial supplies. Green sources of supply for these items are well established in all parts of the country. If your EPP program is already underway, set goals for achieving incremental improvement. For example, you might focus on greening a large, complex construction contract involving a broad spectrum of criteria. Or, you might pilot test performance of new environmental products and share results with other agencies and jurisdictions.
7. **Identify the significant environmental impacts/attributes of the products and services you have targeted for green purchasing**. Conduct research to structure the acquisition towards items with reduced effects on human health and the environment.

8. **Revise specifications and contract language** to include requirements for green products and services. Use nationally recognized and respected environmental standards and specifications developed by federal agencies and third-party standards-setting organizations, including:

   - **Comprehensive Procurement Guidelines (CPG)**: (http://www.epa.gov/cpg)
     Promotes the purchase of recycled-content products, particularly those made with postconsumer recovered materials. Currently, 62 products are designated in seven categories:
     - Paper and Paper Products
     - Vehicular (i.e. oil, lubricants, tires)
     - Construction
     - Transportation Products
     - Park and Recreation
     - Landscaping
     - Nonpaper Office Products
     - Miscellaneous

Questions to ask before purchasing a product include:

- Is the product less hazardous?
- Is it reusable or more durable?
- Is it made from recycled materials?
- What happens to the product at the end of its life? Can it be recycled? Will the manufacturer take the product back? Will it need special disposal?
- Does it conserve energy or water?
- What is needed to properly maintain and/or operate this product?
- Have its environmental attributes been certified by a nonbiased, widely accepted source?

- **ENERGY STAR®**: (http://www.energystar.gov) Qualifies and promotes the use of energy-efficient office equipment, appliances, windows, lighting, and other products that represent the top 25 percent of energy efficiency in their class. ENERGY STAR qualified products are available in more than 50 product categories.
- **WaterSense®**: (http://www.epa.gov/watersense/index.html) A partnership program funded by EPA that qualifies, labels, and promotes the purchase of water-efficient products and services.
- **BioPreferred Products**: (http://www.biopreferred.gov) A resource for producers of biobased products, and a list of federal agencies required to purchase those biobased products as specified under the 2002 Farm Security and Rural Investment Act (FSRIA) (Farm Bill).
- **Green Seal**: (http://www.greenseal.org) Provides science-based environmental certification standards using the Guiding Principles and Procedures for Type I Environmental Labeling adopted by the International Organization for Standardization (ISO 14024). Green Seal standards include those for paper, paint, and janitorial cleaning products and services.
- **Electronic Product Environmental Assessment Tool (EPEAT®)**: (http://www.epeat.net)
  A system that helps purchasers evaluate, compare, and select desktop computers, notebooks, and monitors based on their environmental attributes.

9. **Advertise your agency's interest in procuring environmentally preferable goods and services** through normal procurement channels (pre-solicitation notices, sources-sought notices, vendor meetings, newspaper and Web advertisements, workshops, conferences) and develop lists of local, regional, and national sources of supply. Communicate internally as well, especially to employees who use agency purchase cards.

10. **Require that suppliers certify** that they are providing green products as specified. Conduct site visits to manufacturing facilities or otherwise verify vendor claims. (If you specify products labeled under programs such as ENERGY STAR®, Green Seal®, Ecologo®, and EPEAT®, verification is already handled by the certifying organization.)

11. **Track the purchase of environmentally preferable products and services within your agency**. Determine if you are receiving responsive bids at competitive prices. If not, adjust requirements or consider price preferences. Track purchases against the benchmarks and goals previously established to evaluate your efforts and report progress.

12. **Integrate feedback mechanisms into your green purchasing program**. Make it easy for employees, users, vendors, and the public to comment on the quality and performance of new EPP items. Revise specifications and bid language to address valid issues raised.

13. **Calculate the environmental benefits** of your green purchasing efforts to demonstrate their contributions towards human health and the environment. Environmental benefit calculators exist for some green products, including recycled-content paper, electronics, and janitorial products. A summary of existing calculators as of October 2006, titled *Promoting Green Purchasing: Tools and Resources to Quantify the Benefits of Environmentally Preferable Purchasing,* is available at <http://www.epa.gov/epp>.

14. **Evaluate your purchasing program annually** and make changes as needed to ensure continual improvement. Document and publicize your agency's green purchasing activities and accomplishments in an annual report to ensure continued support from management, staff, and the public.

15. **Stay current** with the constantly evolving green purchasing world by monitoring reputable Web sites, attending conferences, and networking with other jurisdictions and organizations also striving to green their operations. See "Key Tools and Resources" below.

Highlighting Success

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

http://www.epa.gov/epp/pubs/case/mass.pdf

Organization Type: State government

Focus Area: Environmentally preferable purchasing

Developed by EPA's EPP program, this insight into the commonwealth of Massachusetts' model EPP program provides a roadmap for integrating environmental considerations into state procurement. In a unique approach that has made the Massachusetts program one of the best in the nation, the commonwealth hired two individuals to coordinate EPP from the state purchasing office, a strategy that has brought significant success. This case study explains how purchasing works in Massachusetts and details how environmental considerations have been integrated at the process level. It also explains the process by which staff evaluate new products, educate vendors and end-users, and measure success. The tips will help other state governments launch an integrated, sustainable environmentally preferable purchasing program.

Key Tools and Resources

EPA's Environmentally Preferable Purchasing Program

A federal program that encourages and assists agencies in purchasing environmentally preferable products and services. The Web site provides guidance, tools, resources, calculators, case studies, and a database of EPP products (see below).

http://www.epa.gov/oppt/epp/index.htm

- **EPP Database**
  Provides environmental information on more than 600 products and services, including sample contract language, specifications, and policies created and used by federal and state governments and others to buy environmentally preferable products and services.

  http://yosemite1.epa.gov/oppt/eppstand2.nsf

Office of the Federal Environmental Executive—Green Purchasing Web Site

Includes numerous resources on buying biobased products, including fact sheets, information on where to find products, and sample contract language for various settings. Includes sample language for custodial contracts and contract language for purchasing biobased products in building operation and maintenance, vehicular maintenance, and grounds maintenance contracts.

www.fedcenter.gov

ENERGY STAR Purchasing Web Site

Offers a variety of resources including specifications that detail the performance requirements of ENERGY STAR qualified products; sample procurement language; and lists of ENERGY STAR qualified products by manufacturer and model number.

http://www.energystar.gov/purchasing

ENERGY STAR® Quantity Quotes Tool

An online bulk purchasing tool developed by the U.S. Department of Energy designed to help bulk purchasers of ENERGY STAR qualified appliances, light bulbs, fixtures, and other qualified products obtain competitive quotes.

http://www.quantityquotes.net/default.aspx

EPA Comprehensive Procurement Guidelines (CPG) Product Directory

A searchable directory of vendors who sell or distribute CPG-designated products with recycled content.

http://www.epa.gov/epawaste/conserve/tools/cpg/database.htm

USDA BioPreferred Tools for Procurement Personnel

Offers tools specifically for procurement personnel including catalogs listing identified and commercially available biobased products, trainings, and contract templates.

http://www.usda.gov/procurement/programs/biobased/procurementtools.htm

The Responsible Purchasing Network (RPN)

A diverse network of stakeholders that practices responsible purchasing. Posts reports, guides, and calculators on specific products (i.e. computers, fleets, lighting) that are available only to members.

http://www.newdream.org/work/rpn.php

EPEAT®

An easy-to-use, online tool to help institutional purchasers select and compare computer desktops, laptops, and monitors based on their environmental attributes. EPEAT®-registered computer desktops, laptops, and monitors must meet an environmental performance standard for electronic products.

http://www.epeat.net

Northeast Recycling Council (NERC)

Provides a comprehensive list of EPP resources and links to public- and private-sector EPP information.

http://nerc.org/topic_areas/environmentally_preferable_green_purchasing.html

State and Local Examples

State of California's "Buy Green" Best Practices Manual

Provides general guidance on finding "best value" and understanding the core principals of EPP, as well as specific guidance on what to look for when purchasing more than 30 products.

http://www.green.ca.gov/EPP/Introduction/default.htm

Massachusetts EPP Procurement Program Web Site

Describes environmental products available on state contracts; lists state agencies piloting various recycled products; and reports on Massachusetts' EPP efforts.

http://www.mass.gov/?pageID=afsubtopic&L=5&L0=Home&L1=Budget,+Taxes+%26+Procurement&L2=Procurement+Information+%26+Resources&L3=Procurement+Programs+and+Services&L4=Environmentally+Preferable+Products+(EPP)+Procurement+Program&sid=Eoaf

King County, Washington, Recycled Product Procurement Program

Includes bid and contract specifications for recycled products and provides examples of departments using recycled products.

http://www.kingcounty.gov/operations/procurement.aspx

Minnesota Environmentally Responsible Purchasing Program

Provides details of Minnesota's environmentally responsible purchasing program.

http://www.mmd.admin.state.mn.us/envir.htm

Washington State Purchasing Reference Guide for EPP

Provides resources for buyers at state agencies, colleges, and universities, and political subdivisions.

http://www.ga.wa.gov/Sustainability/index.html

The Greening the Government fact sheet series was created by U.S. EPA Region 8.

Waste Prevention and Recycling

EVERY STAGE OF A PRODUCT'S LIFE CYCLE—EXTRACTION, MANUFACTURING, DISTRIBUTION, USE, AND DISPOSAL—indirectly or directly contributes to the concentration of greenhouse gases (GHGs) in the atmosphere and affects the global climate. Waste prevention and recycling—jointly referred to as waste reduction—offer significant potential for decreasing GHG emissions.

— U.S. Environmental Protection Agency (EPA)

Best Management Practices

1. **Organize a team** to help plan, design, and implement your waste reduction program. Your team should include personnel familiar with the agency's overall operations and may include employees from various departments, such as building supervisors, technical/operational staff, administrative staff, maintenance/janitorial staff, and purchasing staff. Responsibilities of team members may include setting short-term and long-term goals, collecting and analyzing information to help determine the scope of the program, promoting the program and educating other employees, monitoring progress, and reporting to management or others. Select a team leader who will be a program champion. Add waste reduction responsibilities to the leader's job description to allow sufficient time to be devoted to the program. The team should meet regularly to maintain the program's momentum.
2. **Conduct a waste assessment** to gather information about your facility and identify the types and amount of waste your agency produces. During the waste assessment, examine current waste reduction practices, document results, and assess the potential to divert materials from the waste stream. EPA's WasteWise program offers step-by-step instructions for conducting several types of waste assessments (http://www.epa.gov/epawaste/partnerships/wastewise/plan-program.htm).
3. **Establish a baseline** recycling rate, waste diversion rate, or per capita pounds recycled (http://www.epa.gov/epawaste/partnerships/wastewise/plan-program.htm). A waste diversion rate includes any waste prevention activities—reuse, donation, or elimination—as well as recycling. Both rate calculations require a facility to collect trash data, which can be a challenge for many facilities. If this is not feasible, measure pounds recycled to determine your baseline. To collect weights, re-negotiate contracts with haulers to require that they provide metrics, or use volume-to-weight conversion factors.
4. **Identify waste streams to target information** based on criteria that include ease of implementation and your agency's priorities. For example, consider if the activity will reduce waste or disposal/purchasing costs, result in significant environmental benefits, or engage employees. Then, consider the operational feasibility and annual costs and savings. For recycling activities, be sure to

determine if a market exists for the materials you wish to collect—if not, research other possible outlets such as materials exchanges.

5. **Set specific goals** that can be tracked and measured for all functional areas of your agency, including the office areas, laboratories, cafeterias, grounds, and construction and demolition sites. WasteWise offers tools, resources, and technical assistance to help organizations set waste reduction goals. For ideas on waste reduction activities, see the Selected Goals of WasteWise® Partners (http://www.epa.gov/epawaste/partnerships/wastewise/plan-program.htm) or EPA Facility Waste Reduction Best Practices (http://www.epa.gov/oaintrnt/practices/recycling.htm).

   - **Prioritize waste prevention over recycling**. Preventing waste from being generated nets the greatest environmental benefits, as well as substantial cost savings. Explore options to donate or internally reuse items before recycling. Examples of waste prevention activities include reducing paper use by duplex copying and printing; reusing or donating office supplies and equipment; leasing electronics and other equipment; purchasing in bulk; and creating or participating in waste exchanges.
   - **Continually expand the number of materials you recycle** to include new materials such as batteries, technotrash, electronics, ink jet/toner cartridges, or fluorescent tubes. See *Recycler Directories* and the *EPA Listing of Materials and Waste Exchanges* in "Key Tools and Resources" below for outlets for recyclable commodities.

6. **Use clear, consistent labeling and signage** to educate employees on recycling procedures. Standardizing a program—throughout a single building or several facilities—with consistent containers in convenient locations, signage, and labeling can help to increase the amount of recyclables collected.

7. **Establish a formal waste reduction policy** that covers your waste prevention and recycling goals to add credibility and strength to your program. This policy should adhere to federal and state regulations. Make sure waste haulers, recyclers, janitorial staff, and any others who play a role in your waste reduction program are aware of your policy.

8. **Educate employees**. A waste reduction program will not be successful if it does not have the buy-in of employees at the agency. Draft waste reduction guidelines for the facility and include them in new employee packets or trainings. Update employees regularly by sending emails, posting Web pages, drafting articles for internal or external newsletters, or displaying posters. Consider establishing a "help desk" for your agency that provides access to an individual who can assist with contamination, pests, or other problems.

Key materials and activities to consider include:

- **Packaging**. Work with suppliers to request reduced packaging. Learn more through the *WasteWise Update: Building Supplier Partnerships.* (http://www.epa.gov/osw/partnerships/wastewise/pubs/wwupda9.pdf)
- **Construction and demolition (C&D) debris**. During C&D projects, specify the reuse or salvaging of materials in contracts. See EPA's C&D Materials Web site for more information. (http://www.epa.gov/epaoswer/non-hw/debris-new/index.htm)
- **Electronics**. Ensure that computers and other electronic equipment are properly managed at end-of-life. Find out how and where in the Electronics Waste Management section below.
- **Duplex printing/copying**. Set printers to duplex by default, and work with your information technology (IT) group to educate employees on duplex settings.

9. **Host periodic educational events** in conjunction with days such as America Recycles Day and Earth Day. The America Recycles Day Web site (http://www.nrc-recycle.org/americarecycles.aspx) and the Earth Day Network (http://www.earthday.net) offer many ideas on how to get people enthused and involved.

10. **Maintain ongoing communication with the janitorial contractor** and property manager regarding waste reduction efforts. Consider recognizing janitorial staff in some way when they contribute to a recycling success.

11. **Advertise the climate/waste connection** to employees and the public. Publicizing that waste reduction mitigates the greenhouse gases generated in a product's extraction, manufacturing, distribution, use, and disposal can garner support for your efforts. For more information, see EPA's Climate and Waste Web site (http://www.epa.gov/epaoswer/non-hw/reduce/wstewise/climate/change.htm).

12. **Offer incentives** to encourage employees to participate in the waste reduction program. For example, reward employees who figure out a new way to reduce waste or offer discounts in the cafeteria to employees bringing their own bag. Consider reinvigorating your program by establishing competition or challenge among facilities. See the Minnesota Resource Recovery Program for an example (http://www.rro.state.mn.us/index.html).

13. **Monitor your program, track progress, and quantify results**. Solicit feedback from employees to find out what's working and what's not. To the extent possible, track progress by collecting data on a monthly basis. WasteWise offers a spreadsheet to help you track the amount recycled, expenses, and cost savings (http://www.epa.gov/epawaste/partnerships/wastewise/measure-progress.htm).

14. **Calculate environmental benefits**. Use the data collected to determine the environmental and economic benefits of your waste reduction program and establish a recycling rate for your agency. EPA's WAste Reduction Model (WARM) Calculator (http://www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html) will convert waste reduction values into greenhouse gas emission reductions and energy savings. Compare your results to the baseline to see the impact of implementing a waste reduction program.

15. **Promote the program's successes** to employees and the public via Web sites and newsletters. Consider joining WasteWise to gain national recognition for your efforts. Encourage facilities to apply for awards to generate publicity and enthusiasm behind your program.

16. **Reevaluate your program** on a regular basis to assess if it is working for your agency. Obtain feedback from employees: ask if there are any problems or confusion about the program and request suggestions for improvement. Expand on successful aspects of the program and be willing to change activities that are ineffective.

17. **Close the loop by purchasing recycled-content products**. Purchasing recycled-content products creates a demand for recycled commodities and preserves valuable resources. See the Environmentally Preferable Purchasing fact sheet for more information.

Highlighting Success

Recycling Best Practices at Federal Facilities

www.fedcenter.gov/programs/buygreen/

Organization Type: Federal government

Focus Area: Waste reduction

The Office of the Federal Environmental Executive profiles innovative recycling and waste diversion efforts by federal agencies and facilities. From partnerships with local Boy Scouts of America troops to comprehensive recycling program overhauls, these case studies describe a wide array of creative strategies. In many cases, these strategies for increasing recycling rates and expanding waste diversion involve local communities, and all serve as great examples for state and local facilities looking to improve resource efficiency.

The Yellowstone National Park Recycling Program

www.epa.gov/osw/conserve/rrr/rogo/documents/yellowstone.pdf

Organization Type: Federal government

Focus Area: Waste reduction

This description of how Yellowstone National Park developed a recycling program covering 35,000 square miles of land in three states provides an overview of developing and maintaining strong recycling practices on park land. With information on the collaboration between park officials, multiple state environmental agencies, EPA, park concessionaries, and neighboring communities, the case study offers insight into challenges, solutions, and reasons for success.

Key Tools and Resources

EPA WasteWise® Web Site

Offers resources on starting or expanding a waste reduction program.

http://www.epa.gov/wastewise

- **The WasteWise® Toolkit:** Outlines steps for setting up a waste reduction program, from setting goals to measuring results.

  http://wastewise.tms.icfi.com/plan.htm

- **Selected Goals of WasteWise® Partners:** Provides many simple ideas for actions you can take throughout the various functional areas of your facility.

  http://wastewise.tms.icfi.com/pubs/goals.pdf

- **WasteWise® Updates:** Technical assistance publications that provide guidance, case studies, and resources on specific topics such as calculating waste reduction, recovering organic wastes, and resource management.

  http://www.epa.gov/epaoswer/non-hw/reduce/wstewise/pubs.htm#wwupd

Waste Management—EPA Performance Track
Provides waste conversion factors as well as resources on source reduction and recycling.

www.epa.gov/perftrac/

Toolkit for Solid Waste Management—National Park Service Intermountain Region
A step-by-step toolkit on developing an integrated solid waste management program in parks.

http://www.epa.gov/waste/conserve/rrr/rogo/documents/swtoolkit.pdf

EPA Recycling Measurement Methodology
Provides standard worksheets to assist states and local governments in compiling data and calculating a standard recycling rate.

http://www.epa.gov/epaoswer/non-hw/recycle/recmeas/index.htm

Recycle on the Go
Offers basic steps and case studies on developing an effective recycling program in public places such as parks, stadiums, convention centers, airports and other transportation hubs, shopping centers, and at special events.

http://www.epa.gov/epaoswer/osw/conserve/onthego/index.htm

EPA Construction and Demolition (C&D) Waste Reduction Web Site
Provides wide range of C&D materials reduction techniques by methodology, as well as success stories about C&D reduction and recycling.

http://www.epa.gov/epaoswer/non-hw/debris-new/index.htm

EPA Resources for Municipal Recyclers
Helps government officials efficiently manage municipal waste streams with practical tools for implementing best practices in achieving recycling and recovery goals. Includes information on pay-as-you-throw and full cost accounting.

http://www.epa.gov/osw/conserve/tools/index.htm

Recycler Directories

American Recycling Markets Directory/Reference Manual (ARM)
Contains state-by-state listings of recycling companies that recycle paper, scrap metals, demolition debris, plastics, rubber, glass, used oil, and textiles.

http://www.recyclingmarkets.net

Earth 911
Delivers actionable local information on recycling and product stewardship as well as a directory by zip code of recyclers of nearly 100 materials, from paint to carpet padding.

http://earth911.org

EPA Listing of Materials and Waste Exchanges
Links to markets for buying and selling reusable and recyclable commodities.

www.epa.gov/osw/conserve/tools/exchange.htm

Electronics Waste Management

Federal Electronics Challenge (FEC) End-of-Life Management
Provides resources to assist agencies in improving electronics end-of-life practices.

http://www.federalelectronicschallenge.net/resources/eolmngt.htm

Electronic Industries Alliance's Consumer Education Initiative
Helps site visitors find reuse, recycling, and donation programs for electronics products in their state.

http://www.eiae.org

State and Local Examples

Colorado's "Greening" of State Government
Learn about Colorado's environmentally preferable purchasing.

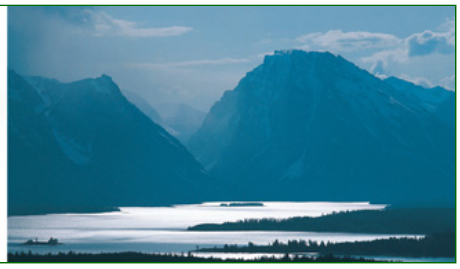
http://www.colorado.gov/energy/index.php?/greening/

Minnesota State Government Resource Recovery Program
Promotes waste reduction and recycling in Minnesota government.

http://www.rro.state.mn.us/index.html

GREENING GOVERNMENT

Water Conservation



WATER CONSERVATION HAS BECOME A NATIONAL PRIORITY. A recent government survey showed that at least 36 states are anticipating local, regional, or statewide water shortages by 2013. A growing population and increased per capita demand for water have put additional stress on water supplies and distribution systems, threatening human health and the environment.

Best Management Practices

1. **Develop a water use management plan**. A well-developed water management plan should include water conservation goals and priorities, standard operating procedures, water utility information, and drought contingency planning. See guidance on developing a water management plan on the Greening EPA Web site. (http://www.epa.gov/oaintrnt/water/plans.htm)
2. **Gather usage data from your water and wastewater utilities** to set baselines and water conservation goals.
3. **Track water use** through metering, regularly scheduled water audits, or other forms of measuring water use. Evaluate trends against the baseline and investigate and resolve any unexpected deviations in water use. Metering also provides documentation for reporting and publicizing success. Consider installing sub-meters for major usage points.
4. **Verify with your water and wastewater utilities that your current rate schedules are correct**, or determine whether alternatives are available to save money. For example, if you are being charged extra for a large commercial connection, make sure it is necessary to meet water demand.
5. **Conduct routine audits** to identify all major water-using processes, the location and accuracy of water measurement devices, and main shut-off valves, as well as to verify equipment operating schedules and building occupancy schedules. Routine audits improve accounting and help validate the need to reduce water losses. If metering is not an option, use the Federal Water Use Indices to estimate your expected water usage. www1.eere.energy.gov/femp/program/waterefficiency_useindices.html
6. **Detect and repair leaks**. In an older facility, leaks can account for 10 percent or more of water use. Baseline data that includes seasonal minimum and daily minimal waste usage will flag leaks, since significant spikes during low-use times can be assumed to be leak-related and would indicate the need for a full-scale leak detection survey. Leak surveys involve visual inspections of water connections on equipment and plumbing by operations and maintenance staff. Establish a user-friendly method for employees to report leaks and fix them immediately. Encourage janitorial crews to report problems. The American Water Works Association's (AWWA's) Water Audit Software can help you establish a

water- use baseline and better recognize leaks.
www.awwa.org/Resources/WaterLossControl.cfm?ItemNumber=48511&navItemNumber=48158

7. **Install smart landscaping**. Limit the area of turf that requires irrigation and avoid long, narrow strips of turf between paved areas that are particularly hard to irrigate efficiently. Specify water-efficient and climate-appropriate landscaping design and practices in grounds maintenance and landscaping contracts. Increase soil moisture content by amending with humus or compost, and mulch plantings to limit irrigation needs. Avoid ornamental water features such as fountains or waterfalls, which cause evaporation and require refilling. See the Web site: Creating Native Landscapes in the Northern Great Plains and Rocky Mountains. (http://www.mt.nrcs.usda.gov/technical/ecs/plants/xeriscp/index.html)

8. **Install and maintain water-efficient irrigation systems**. Some experts estimate that more than 50 percent of commercial and residential irrigation water is wasted due to evaporation, wind, poor management, and/or improper system design, installation, or lack of maintenance. Employ technological advances, such as weather-based controllers or moisture sensors that control irrigation based on need rather than on a predetermined schedule. A drip irrigation system can reduce irrigation water use by 20 percent or more over conventional technologies. Consult with experts to determine if such technologies would be appropriate for specific irrigation systems. EPA's WaterSense® program partners with certified irrigation professionals who have made a commitment to water efficiency. Visit the WaterSense irrigation services Web site (http://www.epa.gov/watersense/pp/irrprof.htm) for more information on selecting qualified irrigation contractors.

9. **Replace older, inefficient toilets and urinals** with high-efficiency models. Toilet and urinal flushing make up the majority of indoor water use for office buildings. Unless your facility is relatively new or has been refurbished recently, toilets and urinals are probably using too much water. Visit the Federal Energy Management Program (FEMP) Web site
www1.eere.energy.gov/femp/technologies/eep_urinals.html and the WaterSense® Web site (http://www.epa.gov/watersense/pubs/toilets.htm) for product information.

10. **Install high-efficiency faucets and showerheads** or retrofit existing faucets with aerators or other devices that restrict flow to 0.5 gallons per minute (gpm) for all public lavatories and 1.5 gpm for private bathrooms. Consult FEMP Water Efficiency BMP #7 for more information.
www1.eere.energy.gov/femp/technologies/eep_showerhead.html

11. **Ensure that commercial kitchens are both energy and water efficient by auditing large volume** hot water uses such as dishwashing. See FEMP Water Efficiency BMP #11.
http://www1.eere.energy.gov/femp/program/waterefficiency_bmp11.html

12. **Save water in laboratories** by targeting water use in equipment such as water treatment systems, sterilization/disinfection systems, photographic and X-ray equipment, and glassware washers. See Laboratories for the 21st Century's Water Efficiency Guidance for Laboratories (http://www.labs21century.gov/pdf/bp_water_508.pdf) or FEMP Water Efficiency BMP #12 http://www1.eere.energy.gov/femp/program/waterefficiency_bmp12.html for a myriad of water conservation strategies for laboratories.

13. **Save water in janitorial, maintenance, laundry, and other water-using operations**. Janitorial staff should be instructed to refrain from cleaning sidewalks and other paved surfaces with sprayed water. If your facility has a laundry, evaluate the water use of your current washing equipment. New, efficient commercial laundry models are programmable to use water based on the degree of soiling of the items. For existing washing machines, encourage users to wash only full loads or to select fill

levels commensurate with load size, if feasible. Maintenance staff should be instructed to regularly check water-using equipment for proper flow rates per manufacturers' instructions and to check for equipment leaks.

14. **Consider alternate water sources** for landscape irrigation, cooling tower makeup, and toilet and urinal flushing. Alternate sources might include reclaimed water, gray water, or storm water. For more information, see FEMP Water Efficiency BMP #14. www1.eere.energy.gov/femp/program/waterefficiency_bmp14.html

15. **Educate employees and the public** about the facility's water conservation activities. New procedures, retrofits, and replacements are most effective when users understand how to operate them properly. Additionally, informing the public can increase support for these efforts. For ideas on education and outreach, see FEMP Water Efficiency BMP #2. http://www1.eere.energy.gov/femp/program/waterefficiency_bmp2.html

Key Tools and Resources

Water Efficiency—Federal Energy Management Program (FEMP)
Provides resources to help agencies use water more efficiently, including water efficiency basics, applicable standards and regulations, best practices, case studies, and additional resources.

http://www1.eere.energy.gov/femp/program/waterefficiency.html

- **Best Management Practices**
  Developed to help federal agency personnel achieve water efficiency goals of Executive Order 13423. http://www1.eere.energy.gov/femp/program/waterefficiency_bmp.html
- **Establishing Baseline and Meeting Water Conservation Goals of Executive Order 13423**
  Provides extensive guidance on meeting the water reduction requirements of E.O. 13423, including baseline development and efficiency opportunity identification.

  http://www1.eere.energy.gov/femp/pdfs/water_guidance.pdf

FedCenter—Natural Resources
Compiles numerous resources on water conservation such as guidance on reducing the amount of water used for irrigation, innovative and alternative technologies for water efficiency, and water conservation techniques.

http://www.fedcenter.gov/programs/natural

ENERGY STAR® Building Portfolio Manager
Helps building managers track and monitor their building energy and water use.

http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager

Creating Native Landscapes in the Northern Great Plains and Rocky Mountains

Step-by-step guidance from the U.S. Department of Agriculture on planning a native landscape, choosing the right plants, landscape maintenance, and plant protection.

http://www.mt.nrcs.usda.gov/technical/ecs/plants/xeriscp/index.html

WaterSense®

A partnership program sponsored by EPA that makes it easy for Americans to save water and protect the environment. The Web site includes a directory of products and services that have earned the WaterSense label.

http://www.epa.gov/watersense

U.S. General Services Administration (GSA) Water Management Guide

Provides GSA facility managers with information on developing water management plans, including overviews of available technologies, wastewater recycling, and financing options.

http://www.gsa.gov/gsa/cm_attachments/GSA_DOCUMENT/waterguide_new_R2E-c-t-r_0Z5RDZ-i34K-pR.pdf

Laboratories for the 21st Century

A voluntary partnership program to improve the environmental performance of laboratories. The program has a series of best practices guides including "Water Efficiency Guide for Laboratories."

http://www.labs21century.gov/pdf/bp_water_508.pdf

GreenScapes

An EPA program that offers information on maintaining landscapes that preserve natural resources and prevent waste and pollution.

http://www.epa.gov/greenscapes

State, Local, and Federal Examples

FEMP Water Efficiency Case Studies

Profiles the performance, economics, and/or success of water efficiency projects in federal facilities.

http://www1.eere.energy.gov/femp/program/waterefficiency_csstudies.html

Water Case Studies—N.C. Project Green

Water conservation project case studies at several state-supported organizations including universities, a hospital, and the North Carolina Department of Corrections.

http://www.ncprojectgreen.com/water/casestudies.asp

Commercial Water Conservation Case Studies—Southwest Florida Water Management District

Lists water efficiency recommendations made to several industrial, commercial and institutional facilities and includes a checklist of action items.

http://www.swfwmd.state.fl.us/conservation/waterwork

The Greening the Government fact sheet series was created by U.S. EPA Region 8.

GREENING GOVERNMENT

Fleet/Transportation Management

MOTOR VEHICLES AND EQUIPMENT HAVE A SIGNIFICANT ENVIRONMENTAL IMPACT because of their emission of pollutants such as hydrocarbons, nitrous oxides, and greenhouse gases that contribute to global warming. By greening their fleets, government agencies ensure that expenditures of public dollars are made in a manner consistent with improving local air quality and reducing greenhouse gas emissions.

Best Management Practices

1. **Adopt a green fleet policy** requiring agency personnel to improve the fleet's energy efficiency and reduce emissions through procurement, management, and operations. Set specific or numeric goals and monitor, review, and adjust the policy as necessary. The Oregon Green Fleet Toolkit (http://www.sustainableoregon.net/toolkit/green_fleet.cfm) offers points to consider when implementing a green fleet policy.
2. **Optimize your fleet:**
   - Maintain an appropriately sized fleet based on your agency's needs, and downsize when possible.
   - "Right-size" to ensure vehicles are the most fuel-efficient possible based on the task's requirements.
   - Replace older, infrequently-used, and inefficient vehicles with higher fuel economy vehicles (e.g., smaller sized vehicles, hybrid-electric vehicles, other advanced technology vehicles).
   - Dispatch the most efficient vehicles first.
3. **Purchase alternative fuel vehicles** to reduce petroleum consumption and increase alternative fuel use. Search for an alternative or advanced vehicle on the U.S. Department of Energy (DOE) Web site. (http://www.eere.energy.gov/afdc/progs/vehicles_search.php) The Energy Policy Act of 1992 (EPAct) requires 75 percent of light-duty vehicles acquired in covered fleets to be alternative fuel vehicles. State government fleets that operate, lease, or control 50 or more light-duty vehicles are covered under EPAct. For more information, see the EPAct State and Alternative Fuel Provider Rule. http://www1.eere.energy.gov/vehiclesandfuels/epact/compliance_methods.html
4. **Use alternative fuels in vehicles capable of operating on such technology**. Alternative fuels include biodiesel, electricity, ethanol, hydrogen, natural gas, and propane. Determine where these fuels are available in your area, and provide agency employees with information on how to locate the fueling stations and how to fuel the vehicles. Learn more about alternative fuel vehicles, commercially available alternative fuels, and emerging alternative fuels from DOE's Alternative Fuels and Advanced Vehicles Data Center. (http://www.eere.energy.gov/afdc) Use DOE's Alternative

Fueling Station Locator (http://www.eere.energy.gov/afdc/stations/find_station.php) to identify stations where alternative vehicles can be fueled.

5. **Consider relocating alternative fuel vehicles** in your fleet closer to refueling stations to optimize use of the vehicles and the fuels.
6. **Install alternative fuel infrastructure** at your facility if your site meets the necessary conditions.
7. **Track data** on petroleum or alternative fuel type, consumption, and mileage for each vehicle on a monthly basis. Tracking will help you meet regulatory mandates and identify inefficiencies in your fleet. Evaluate commercial software options to help you with this task.
8. **Review information about plug-in hybrid vehicles** to determine if they are a viable option for your agency. The cost should be comparable to non-plug-in hybrid vehicles over the vehicle's life cycle. Learn more about plug-in hybrid vehicles from DOE. (http://www.eere.energy.gov/afdc/vehicles/plugin_hybrids.html)
9. **Identify a minimum fuel standard** (in miles per gallon) for each vehicle class and strive to include "zero emission vehicles" to reduce emissions from your fleet. The U.S. Environmental Protection Agency offers the Green Vehicle Guide (http://www.epa.gov/greenvehicles/Index.do;jsessionid=8230a81d2ea06c7d227a) to help you identify the most fuel efficient vehicle that meets your needs.
10. **Reduce miles traveled** by consolidating trips, increasing video conferencing and Web conferencing, using mass transportation/agency shuttles, and optimizing routes.
11. **Utilize tools and equipment** to increase fuel efficiency, such as low-rolling resistant tires, synthetic oil, and idle shut off controls.
12. **Maintain and tune vehicles** by performing scheduled tune-ups, rotating tires every 5,000 miles and properly inflating tires to improve fuel efficiency and reduce emissions. Additionally, practices in your maintenance shop should be as environmentally friendly as possible: switch to biobased lubricants and greases; use products with recycled content, such as oil, coolant, and tires; recycle these products, and dispose of hazardous materials properly. Explore the possibility of recycling products on site, using closed-loop systems.
13. **If you service air conditioning systems in your fleet, monitor R-134a usage and repair system leaks**. Track use of R-134a, an extremely powerful greenhouse gas, to identify potential leaks. For more information, see the links on HFC Emission Reductions from Mobile Air Conditioning at <http://www.arb.ca.gov/cc/hfc-mac/hfc-mac.htm>.
14. **Educate employees** about driving techniques that can reduce fuel consumption.
15. **Implement an anti-idling or idle-reduction** program to reduce fuel use and decrease emissions from your fleet. DOE offers idling reduction strategies for light- and medium-duty vehicles and school buses. (http://www.eere.energy.gov/afdc/vehicles/idle_reduction.html)
16. **Promote employee commuting planning:**
    - Allow employees to telecommute, work compressed schedules, and take flex-time.
    - Offer subsidies and other incentives to increase use of public transportation, carpooling, and other alternative transportation methods.

- Encourage bicycling by providing storage racks and showers/changing rooms.
- Share information about commuting alternatives.
- Facilitate carpooling by creating a rideshare board.
- Provide a guaranteed ride home program.
- Develop a parking management program to reduce the number of parked cars.

Find resources and be recognized for helping employees reduce single occupancy vehicle trips at Best Work Places for Commuters. www.bestworkplaces.org

Highlighting Success

EPAct Launches Fleets Toward Minnesota's Alternative Fuel Future

http://www.e85fuel.com/pdf/epactmn.pdf

Organization Type: State government

Focus Area: Green fleets

With aggressive petroleum reduction goals for state fleets, two Minnesota agencies have found success by promoting E85 fuel (a blend of 85 percent ethanol and 15 percent gasoline) and flexible fuel vehicles (FFVs). This combination is a natural choice in Minnesota, which is a producer of ethanol and has an extensive E85 infrastructure.

Approximately 10 percent of the Minnesota Department of Natural Resources' (DNR's) fleet of 1,500 to 1,700 vehicles are FFVs. The agency purchases FFVs wherever they are available as passenger vehicles and when they do not add to the cost of a light-duty truck. The Minnesota Pollution Control Agency (MPCA) is well on its way to reaching a goal of acquiring 75 percent of its vehicles as FFVs and achieving 50 percent E85 use in these vehicles.

This case study offers several keys to success and lessons learned by DNR and MPCA. Using these lessons, other state agencies can build on Minnesota's pioneering efforts to green agency fleets.

Key Tools and Resources

Alternative Fuels and Advanced Vehicles Data Center

Learn more about alternative fuel vehicles, commercially available alternative fuels, and emerging alternative fuels from this DOE Web site.

http://www.eere.energy.gov/afdc

- **Fleets Portal**

  Offers a one-stop-shop for fleets interested in making green vehicle and fuel decisions.

  http://www.eere.energy.gov/afdc/fleets/index.html

- **Database of Alternative Fuel and Advanced Technology Vehicles**
  Identifies alternative or advanced technology vehicles by manufacturer, make, vehicle class, model year, and type of fuel or technology.

  http://www.eere.energy.gov/afdc/progs/vehicles_search.php

- **Alternative Fueling Station Locator**
  Allows users to locate stations where alternative fuel is available to purchase and to search by type of fuel, zip code, and distance from vehicle location.

  http://www.eere.energy.gov/afdc/stations/find_station.php

FedCenter.gov—Transportation

Provides tools, lessons learned, trainings, and information on conferences related to optimizing vehicle maintenance operations, biofuels, and pollution prevention tools and techniques. Also includes links to software and databases that can model engine effectiveness and demonstrate appropriate pollution prevention techniques.

http://www.fedcenter.gov/programs/transportation

EPA Green Vehicle Guide

Use this U.S. Environmental Protection Agency guide to identify the greenest vehicles available for sale in your state, based on EPA ratings. Conduct side by side comparisons of vehicles. Learn which vehicles have earned EPA's SmartWay designation, by achieving a score of 6 or better on each of the Air Pollution and Greenhouse Gas Scores and a combined score of at least 13 when added together.

http://www.epa.gov/greenvehicles

EPA's Clean Vehicles: Clean Fleets

This page provides links to EPA and non-EPA Web-based resources that provide additional information on clean vehicles. Links go directly to specific Web sites or documents that address fleet-related trends and issues.

http://epa.gov/otaq/stateresources/rellinks/cleanfleets.htm

Updated EPA Fuel Economy Ratings

Learn about the U.S. Environmental Protection Agency's new (2007) method for calculating vehicle fuel economy and learn how to read and interpret the new vehicle fuel economy stickers.

http://www.epa.gov/fueleconomy/label.htm

Government Fleet

A Website, electronic publication, and conference organizer serving managers of public vehicle fleets.

http://www.government-fleet.com

Oregon Green Fleet Toolkit

The Sustainable Oregon Toolkit provides an overview of important points to consider when implementing a green fleet strategy.

http://www.sustainableoregon.net/toolkit/green_fleet.cfm

Best Workplaces for Commuters

Find resources and be recognized for helping employees reduce single occupancy vehicle trips at Best Work Places for Commuters.

http://www.bestworkplaces.org

Puget Sound Green Fleets Guide

Advice on how to green your fleet, including strategies for changing vehicles, changing fuels, and changing driving habits.

http://www.psgreenfleets.org

FedFleet Conference

FedFleet is an annual conference and workshop sponsored by the U.S. General Services Administration and the Federal Fleet Policy Council. Access presentations from the 2008 FedFleet conference, held in June 2008 in Dallas TX. Find information about the next FedFleet conference, to be held in July 2009 in Chicago.

http://www.fedfleet.org

Green Highways Partnership (GHP)

The Green Highways Partnership (GHP) is a voluntary, public/private initiative that is revolutionizing our nation's transportation infrastructure. Through concepts such as integrated planning, regulatory flexibility, and market-based rewards, GHP seeks to incorporate environmental streamlining and stewardship into all aspects of the highway lifecycle.

State and Local Examples

King County, Washington

Fleet Administration manages the acquisition, maintenance, replacement, and disposal of a large and diverse fleet of vehicles and off-road equipment, as well as the purchasing and warehousing of a large inventory of construction materials and supplies, traffic signs, safety equipment and hand tools.

http://www.kingcounty.gov/transportation/kcdot/FleetAdministration.aspx

State of Oregon's Fleet Environmental Management System

Oregon's Department of Administrative Services, Statewide Fleet Administration (DAS Fleet) implemented an environmental management system (EMS) for its fleet to help the agency reduce its environmental impact. The system increased the number of alternative fuel or hybrid vehicles to more than 30 percent of the Oregon fleet, among other accomplishments.

http://www.oregon.gov/DAS/SSD/FLEET/docs/07EnvPerf.pdf

The Greening the Government fact sheet series was created by U.S. EPA Region 8.

IT IS ESTIMATED THAT OPERATIONS AND MAINTENANCE PROGRAMS TARGETING ENERGY EFFICIENCY can save 5 percent to 20 percent on energy bills without a significant capital investment. From small to large sites, these savings can represent thousands to hundreds-of-thousands of dollars each year, and many can be achieved with minimal cash outlays.

— U.S. Department of Energy (DOE) Federal Energy Management Program

Best Management Practices

1. **Develop an energy management plan** to guide your agency's actions to reduce energy use. This plan should identify key personnel responsible for leading energy efficiency initiatives and set goals for efficiency improvements. Key resources include:

   - **ENERGY STAR® Guidelines for Energy Management**
     Offers a proven strategy, tools, and resources for quality energy management.
     (http://www.energystar.gov/index.cfm?c=guidelines.guidelines_index)

   - **Leadership in Energy and Environmental Design (LEED) for Existing Buildings Operations and Maintenance Guidelines**
     Outlines best practices for maintaining an energy-efficient facility.
     (https://www.usgbc.org/ShowFile.aspx?DocumentID=3617)

   - **Reducing Energy Use in State Facilities Through Conservation Measures—California Flex Your Power**
     Provides a step-by-step approach to planning, implementing, and financing various energy conservation plans in state agency facilities.
     (http://www.fypower.org/pdf/BPG_State1_Con&Eff.pdf)

2. **Designate staff** to focus on improving energy efficiency within facilities, as well as to develop training and educational materials. Some organizations designate an Energy Resources Specialist or a Resource Efficiency Manager, an individual focused on improving the use of resources, analyzing utility billings and rate structures, and developing resource management strategies.
   (http://www1.eere.energy.gov/femp/pdfs/om_rem.pdf)

3. **Conduct an audit or review of facilities** to determine baseline energy use and costs, and to identify the areas of greatest opportunity for improvement or the most cost-effective energy-saving opportunities. This can be done by facility engineering staff or by contracting with an energy services company to make preliminary recommendations.

4. **Gather data** in order to develop a baseline and bring to light the current costs associated with energy usage. Track data on an ongoing basis to monitor the progress of energy initiatives and to make adjustments to continually improve and adapt to changing circumstances. ENERGY STAR's Portfolio Manager Program provides benchmarking tools (https://www.energystar.gov/istar/pmpam/##), while the Department of Energy offers performance metric and measuring procedures. http://www1.eere.energy.gov/buildings/commercial_initiative/

5. **Develop an operations and maintenance plan** for ongoing maintenance of building systems. Key resources include:

   - **ENERGY STAR Retrocommissioning Guidance**
     Provides guidance on retrocommissioning—ensuring that a building operates as intended and meets current operational needs.
     (http://www.energystar.gov/index.cfm?c=business.EPA_BUM_CH5_RetroComm)

   - **Federal Energy Management Program's (FEMP's) Operations and Maintenance Best Practices Guide**
     Offers information on effective operations and maintenance (O&M) practices for systems and equipment typically found at federal facilities.
     (http://www1.eere.energy.gov/femp/operations_maintenance/om_bpguide.html)

6. **Implement "low-hanging fruit" strategies for reducing energy waste** such as behavioral and procedural changes for facility managers, contractors, janitorial staff, and employees. These changes can result in significant energy reduction with minimal associated costs. The following are key best practices:

   - Use sleep settings and turn off computers and monitors when not in use.
   - Consolidate printing activities and turn off seldom-used printers.
   - Reduce the use of personal electronics such as coffee pots and space heaters.
   - Turn off lights when rooms are unoccupied.
   - Make use of natural light when possible by leaving shades and blinds open and interior lights off.
   - Adjust thermostats seasonally by setting them to 68 degrees Fahrenheit in the winter and 78 degrees Fahrenheit in the summer.
   - Work with janitorial staff to implement lighting conservation measures, such as turning lights on only while cleaning.
   - Reduce security lighting to the minimal necessary level, and turn off decorative or unneeded lighting inside/outside.
   - Remove lights from vending machines and/or purchase ENERGY STAR qualified vending machines.
   - Purchase ENERGY STAR qualified office equipment and appliances.

7. **Install or upgrade a computer-based building automation system (BAS)** to automatically operate major building systems. Train staff to use the system, analyze the information provided, make necessary adjustments, and identify opportunities to improve energy performance.

8. **Create a capital plan** for major retrofits or upgrades identified through the initial audit. The plan should include a budget based on options for financing energy efficiency projects. Many alternative financing mechanisms are available including energy savings performance contracts, utility energy service contracts, and efficiency and renewable energy incentive programs. FEMP's Financing Mechanism's Web page (http://www1.eere.energy.gov/femp/financing/mechanisms.html) provides an overview of these options for mitigating prohibitive capital expenses.

9. **Identify the most appropriate renewable energy option** for your agency such as renewable energy products, renewable energy certificates (RECs), or onsite renewable generation. For more information on renewable energy options, see the FEMP Renewable Energy Web page. http://www1.eere.energy.gov/femp/technologies/renewable_energy.html

10. **Provide training for facilities and engineering staff** that builds awareness and skills in a broad range of sustainable building operations topics, such as energy efficiency and equipment and systems operations and maintenance.

Facility upgrades to consider:

- **Efficient lighting systems.** Because lighting generally accounts for 30 to 50 percent of a building's energy use, finding ways to increase lighting efficiency can have a large impact. Lighting improvements may include making good use of natural daylight, installing energy-efficient lights, and installing timers and sensors to control when lights are turned off and on. (http://www1.eere.energy.gov/femp/procurement/eep_lighting_guidance.html)

- **Occupancy sensors.** Occupancy sensors ensure that lights are off when a room is unoccupied. Installing occupancy sensors is easiest when a facility is under construction or renovation, but it can also be done cost-effectively at other times.

- **Cool roofs.** Cool roofs stay cooler on hot, sunny days, leading to reduced building heat gain and savings on summertime cooling costs. See the U.S. EPA's Cool Roofs Web page for further information. (http://www.epa.gov/heatisland/index.html)

11. **Learn from other agencies' and organizations' efforts** by monitoring key Web sites, attending conferences and trainings, and subscribing to relevant listserves such as DOE's Green Power Network (http://apps3.eere.energy.gov/greenpower/subscribe/subscribe.html), which provides news and information on green power markets and products. For information on available trainings, see the Trainings, Conferences, and Events sections on the FedCenter Energy page (http://www.fedcenter.gov/programs/energy) or consider attending the GovEnergy conference. http://www.govenergy.com/

12. **Conduct ongoing employee education** to make employees aware of energy conservation goals and how they are expected to contribute. Provide training sessions, publicize results, and spread the conservation message through e-mail, signage, and newsletters.

13. **Pursue continuous improvement** of energy performance by having systems in place to discover energy savings opportunities. For example, some companies conduct energy treasure hunts in which employees are encouraged to search for energy reduction opportunities over a short period of time. Then, the ideas are prioritized based on pay-back period and difficulty of implementation.

14. **Evaluate the success of your initiatives** by calculating the energy saved, money saved and spent, and associated environmental benefits, such as a reduction in greenhouse gas emissions.

Highlighting Success

Energy Load Reduction: A Case Study of the State Department's Elihu M. Harris State Office Building

http://www.fypower.org/pdf/CS_State_Elihu.pdf

Organization Type: State government

Focus Area: Energy reduction

This case study offers a comprehensive account of how the Elihu M. Harris State Office Building in Oakland, California, managed to reduce its energy load and increase energy efficiency within a single year. The Elihu Harris engineering staff, led by the chief engineer and assisted by the Johnson Controls Service technician, managed all energy conservation projects for the building. All phases of this Peak Load Reduction (PLR) plan are detailed, including planning, energy conservation and efficiency strategies, budgeting, financing, and end results. Also described is the implementation of various conservation strategies discussed in this case study, such as reductions in lighting, heating, ventilating and air conditioning (HVAC), and plug-in loads. The step-by-step summary of the PLR plan serves as a valuable example of how energy load reduction strategies, when implemented carefully and thoroughly, can achieve significant energy and cost savings over a short period of time.

Key Tools and Resources

ENERGY STAR®—Buildings and Plants

Offers resources such as guidelines for energy management, information on green buildings, online tools for meeting energy performance goals, and links to energy professionals.

http://www.energystar.gov/index.cfm?c=business.bus_index

- **Building Portfolio Manager**
  Helps building managers track and monitor their building energy and water use.
  http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager

Effective Operations and Maintenance of Energy-Using Systems—FEMP

Provides extensive tools and resources related to the effective O&M of facilities, including maintenance for specific types of equipment, information on advanced metering, and more.

http://www1.eere.energy.gov/femp/operations_maintenance

- **Operations & Management Guide—FEMP**
  Highlights O&M practices that save an estimated 5 percent to 20 percent on energy bills without a significant capital investment.
  http://www1.eere.energy.gov/femp/operations_maintenance/om_bpguide.html

Reducing Energy Use in State Facilities Through Conservation Measures—CA Flex Your Power

Aims to provide state governments with information on planning, implementing, and financing various energy conservation plans, descriptions of existing programs from state buildings in California, contact information for project leads, and useful energy resources.

http://www.fypower.org/pdf/BPG_State1_Con&Eff.pdf

LEED for Existing Buildings—Operations and Management Rating System
Serves as a road map for property managers, portfolio owners, and service providers who wish to drive down operating costs at their facilities and increase occupant productivity in an environmentally responsible manner.

https://www.usgbc.org/ShowFile.aspx?DocumentID=3617

Utility Management Web Site—FEMP
Offers up-to-date information about energy markets, utility restructuring, renewable power purchasing, demand response, and state energy efficiency funding opportunities.

http://www1.eere.energy.gov/femp/financing/energyincentiveprograms.html

Utility Management Web Site Information Resources—FEMP
Presents analytical software tools intended to help facility managers choose conservation measures that are most cost effective and environmentally friendly. Used at the facility evaluation and assessment stage of energy project development, the tools compare potential energy conservation measures by performing complex energy consumption analyses and modeling, as well as comparative life-cycle costing analyses.

http://www1.eere.energy.gov/femp/information/access_tools.html

Financing Mechanisms—FEMP
Offers guidance for managers deciding whether to fund energy improvements through energy savings performance contracts, utility energy service contracts, efficiency and renewable energy incentive programs, or a combination of these options.

http://www1.eere.energy.gov/femp/financing/mechanisms.html

FedCenter.gov Energy Web Site
Supplies facility managers with various resources concerning rules and regulations guiding federal agencies. While state agencies are not required by law to follow many of these regulations, they serve as valuable guidance for setting energy efficiency goals.

http://www.fedcenter.gov/programs/energy

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
An international organization dedicated to advancing heating, ventilation, air conditioning and refrigeration technology to promote sustainable and efficient energy use.

http://www.ashrae.org

New Construction and Retrofits—FEMP
Assists project managers in thinking through the myriad questions involved in new construction and renovation projects, including how to incorporate efficient technologies, evaluate the life-cycle costs of investments, select an energy-wise design firm, and draft appropriate specifications.

http://www1.eere.energy.gov/buildings/commercial_initiative/

DOE State Energy Program
Contains information on DOE's State Energy Program, which provides grants to the states to design and carry out their own renewable energy and energy efficiency programs.

http://www.eere.energy.gov/state_energy_program/about.cfm

Renewable Energy

Renewable Energy Resources—FEMP
Includes information on how to conserve natural resources and increase the nation's energy security through renewable energy resources. The site details how solar, wind, and plant-based renewable energy can provide some or all of a facility's needs for heating, cooling, and electricity.

www1.eere.energy.gov/femp/technologies/renewable_energy.html

- **Guide to Purchasing Green Power—FEMP**
  Provides an overview of green power markets and describes the necessary steps to buying green power. The guide explores three types of green power products: renewable electricity, renewable energy certificates, and onsite renewable generation.

  http://www1.eere.energy.gov/femp/pdfs/purchase_green_power.pdf
- **Federal Utility Energy Service Contracts** (UESCs) Case Studies—**FEMP**
  Offers case studies about the successful use of UESCs by federal agencies, including the National Institutes of Health, Fermilab, and Little Rock Air Force Base.

  http://www1.eere.energy.gov/femp/financing/uesc_case_studies.html
- **Renewable Energy Case Studies—**FEMP

  Provides links to the publication series, *Achieving Results with Renewable Energy in the Federal Government*, which offer case studies of renewable energy in the federal sector.

  http://www1.eere.energy.gov/femp/renewable_energy/renewable_casestudies.html

EPA Green Power Partnership
Supports organizations—from businesses to government agencies—in identifying green power options that meet their needs and goals.
http://epa.gov/greenpower

Another Example

San Diego State Office Building Case Study—California Flex Your Power
Describes how the San Diego State Office Building implemented a series of conservation improvements, which resulted in a 21 percent reduction in peak KW demand and a 33 percent reduction in energy used in one year.

http://www.fypower.org/pdf/CS_State_San_Deigo.pdf

Environmental Leadership

THROUGH LEADING BY EXAMPLE, state governments play a role in contributing both to consumer demand and to the policy support necessary to drive burgeoning markets for energy efficiency measures, clean electricity generation, and the production of alternative fuels.

— National Governors Association (NGA) Center for Best Practices

Best Management Practices

1. **Involve top management in setting the direction**. In the past, many green government efforts have relied on internal champions to provide the program's energy and momentum. These employees' efforts are laudable, and many have achieved important gains. To truly sustain the effort and coordinate the resources needed to achieve "stretch" goals, however, it is essential to have top management involved. Top management provides the vision, identifies and allocates the necessary resources, and holds others accountable.
2. **Issue a formal green government executive order or directive**. Executive orders or directives are used to establish priorities and goals, authorize the necessary spending in order to achieve those goals, and establish accountability for meeting goals. They signal to all employees that achieving these goals is a top priority, and also help communicate to industry and the public that the government will lead by example.
3. **Designate a top manager to lead the effort**. Programs that are overseen by a respected senior manager or advisor, ideally reporting directly to the top management official, tend to be more visible. This visibility in turn creates greater accountability, thereby ensuring the effort is taken seriously by middle managers and their staff. Some programs have had success by creating a new position, such as a resource efficiency manager or sustainability coordinator, to draw attention to the effort.
4. **Include environmental staff in management meetings**. Regular interaction between those responsible for the environmental program and top management keeps management informed of progress and provides a forum for discussing any problems. It also ensures that those responsible for the program remain informed of decisions being made that could affect the program.
5. **Develop an environmental policy statement, or incorporate environmental language into existing policies**. The policy should reflect the agency's primary commitments with respect to the environment and be appropriate to the agency's size, scope, and nature of its operations. Top management should sign and issue the policy; this ensures employees, industry, and the public understand the commitment behind it. Communicate the policy to all staff, and make it available to the public and other stakeholders, such as customers, subcontractors, suppliers, and vendors, as well as other government entities.

6. **Ensure top managers walk the talk**. Getting top agency officials to incorporate sustainable practices and behaviors into their own daily routines produces a powerful demonstration effect. Senior management can convey their commitment by, for example:
    - Requiring all correspondence to be double sided;
    - Requesting briefing materials be in electronic format only;
    - Using a fuel efficient vehicle (or even public transportation, where practicable) for official travel;
    - Installing and using video teleconferencing for meetings; and
    - Routinely engaging other managers and employees in discussions about the agency's greening efforts.
7. **Conduct a comprehensive, informed evaluation of the organization's environmental footprint**. Programs should set priorities based on a good understanding of exactly how the organization's activities impact the environment. This requires some effort to define the scope for the analysis; identify the activities, services, or products that may affect the environment; measure and quantify the impacts; and understand the implications. Carbon footprinting is a popular way of expressing impacts in a common denominator (CO_2 emissions), but other impacts such as water use, toxic chemical use, and even indoor air quality should not be ignored. Taking into account life-cycle considerations, for example, can help illuminate the environmental implications of products during their manufacture, transportation, and end of life, in addition to their use.
8. **Set goals and objectives for the program**. Establish a set of goals with specific targets, and include time frames for meeting the goals. If the commitment is there, setting lofty "stretch" goals can often elicit breakthrough changes in practices. Targets must be measurable, and it may require some effort to put in place monitoring and measuring programs. Support the goals with a communications plan and outreach program.
9. **Assign responsibility for meeting goals and provide necessary resources**. Even initiatives that can be boiled down to a single goal statement, such as "reduce carbon emissions by 20 percent by 2010," are multi-faceted. Presumably, emissions come from multiple sources: transportation, building energy consumption, computers, and office equipment. Each of these sources, and their energy aspects, are likely to be overseen by different groups or individuals. Managing these sources to reduce overall emissions will require different tools, approaches, and resources. Identify individuals who have responsibility over these activities, the ability to influence behavior, or knowledge of useful tools or techniques. Provide them with the authority to make decisions, and the resources they need to complete projects or tasks that will move the effort forward. Communicate these responsibilities throughout the organization so that constructive input from others can be channeled to those who can act on it.
10. **Monitor, measure, and report on progress**. One of the most oft-repeated mantras of management is: "what gets measured gets managed." This is as true in the environmental arena as it is in other areas of business. If the goal is to reduce greenhouse gases associated with vehicle operation, for example, frequent measuring and reporting of these emissions to employees and others will help reinforce positive behaviors and push the organization toward improved performance.
11. **Consider developing an environmental management system (EMS) for the agency or a subset of the agency (i.e., fleet)**. All federal government agencies and many state agencies have developed EMSs appropriate to the scale and scope of their operations. Doing so has led to improved

efficiencies, savings in resources, better process management, and enhanced reputation and image. An EMS formalizes and institutionalizes many things the organization is already doing, providing a structured approach for managing all of the greening activities.

12. **Develop a set of written procedures, whether through an EMS or otherwise**. A frequently cited benefit of an EMS is that it forces an organization to document how it manages its environmental program. Many organizations gain important insights through the simple process of writing things down. Documenting procedures also means that important information will be available when needed, such as in an emergency situation. This documentation makes the organization less reliant upon specific individuals who might not always be on site, and facilitates a smoother transition when key individuals move on.
13. **Revise employees' work instructions to focus on minimizing environmental impacts**. Break down processes in routine activities to identify where there are opportunities to reduce environmental impacts. Make employees accountable for meeting environmental goals related to their jobs.
14. **Have a plan for transferring responsibility when people leave**. Require those with responsibility to document what it is they do to run the program. Document procedures and integrate environmental responsibilities into job descriptions to make for smoother transitions when employees leave.
15. **Identify and cultivate environmental champions within the agency**. Environmental champions have a personal commitment to the environment and make things happen by identifying problems and generating realistic and organized solutions. Environmental champions can be found in all departments and at all levels of staff and management. To cultivate environmental champions:
    - Inform the unaware. If you arm employees with good information, they will respond positively and intelligently.
    - Motivate the unmotivated. People are most motivated if they know that their opinions and concerns matter. Set up a program to recognize people for their ideas and performance. Reward people for innovative ideas and share the savings when they help to improve the bottom line.
    - Create an organizational culture where environmental champions can emerge.
16. **Conduct trainings**. New employees should be introduced to the environmental program when they are first hired and should receive instruction on specific procedures pertinent to their job performance duties. This should include everything down to and including how to recycle paper or other office waste. Employees involved in work that is regulated or environmentally sensitive may require additional training. Maintain records showing what training the employees receive and how frequently they need any refresher training.
17. **Form a Green Team**. Organize a green team to continuously expand greening initiatives, promote environmental initiatives to other employees, and create liaisons between employees and environmental program leads.
18. **Celebrate and publicize successes**. Highlighting your successes can bolster employees' motivation and buy-in into the environmental program, as well as demonstrate results to the public. Reward employees who contribute to meeting environmental goals with gift certificates, letters from top management, plaques, or other forms of recognition.
19. **Develop a Web site and/or annual report** highlighting your sustainability initiatives for the public and employees.

Highlighting Success

Greening State Government: "Lead by Example" Initiatives

http://www.nga.org/Files/pdf/0807GREENSTATEGOVT.PDF

Organization Type: State government

Focus Area: Environmental leadership

Iowa's Executive Order 41 requires that state agencies procure 10 percent of their electricity from alternate energy sources by 2010. Colorado, Kansas, Michigan, Minnesota, and Oregon have pledged to buy high-efficiency computer equipment and reduce the energy demands of existing computer systems by encouraging employees to use power-management strategies. These are just two of myriad examples of how state governments across the United States are making strides in greening their operations profiled by NGA's Center for Best Practices. In this overview of "lead by example" initiatives, learn what state agencies are doing in the areas of purchasing energy efficient appliances and equipment, creating energy efficiency performance standards for new and existing facilities, greening agency fleets, and developing greenhouse gas emissions reduction targets for state operations. The NGA also details potential financing mechanisms for greening initiatives, such as energy savings performance contracts, aggregated purchasing contracts, revolving loan funds, pension fund investments, and more.

Key Tools and Resources

FedCenter

A "portal" providing information on environmental stewardship and compliance to the federal community. Includes information on drivers for sustainability (such as Executive Order 13423 and the Office of Management and Budget scorecard), sustainability program support, regulatory information, training opportunities, and recognition programs.

http://www.fedcenter.gov

National Association of Counties (NACo) Green Government Database

A searchable database of county green programs, policies, plans, staff descriptions and more. The database was launched in 2008 by the NACo Green Government Initiative and is searchable by state, county size, and topic area.

http://www.naco.org/GreenTemplate.cfm?Section=Green_Government_Database&Template=/cffiles/ggi/green_counties/ggi_search.cfm

Best Management Practices for Green Parks—National Park Service Pacific West Region

Presents a matrix of green practices that define what a green park looks like.

http://www.nps.gov/piro/parkmgmt/upload/Best%20Management%20Practices%20Guide%202006.pdf

EPA National Center for Environmental Innovation

Provides resources on innovating for sustainable results, including innovation forums and environmental innovations in the news.

http://www.epa.gov/innovation/index.htm

Strategies for Environmental Performance—EPA Performance Track

Provides strategies to improve environmental performance in areas from energy management to water use by businesses participating in EPA's National Environmental Performance Track program.

http://www.epa.gov/perftrac/

Sample Environmental Policy Statement—California EPA

An example of a general environmental policy statement that affirms a commitment to reduce ecological impacts from the agency's operations, lead by example, and assist other California state agencies in their efforts.

http://www.calepa.ca.gov/EMS/Policies/#PolicyStatement

Environmental Measurement Resources—EPA Performance Track

Resources for improving a facility's environmental measurement, collected and shared by EPA, nongovernmental organizations, trade groups, and companies.

http://www.epa.gov/perftrac/index.htm

Public Entity Environmental Management System Resource Center (PEER Center)

Provides information and tools to help public entities understand and adopt EMSs for their operations. PEER Center projects have assisted wastewater and drinking water agencies, state highway and transportation departments, ports, county and local solid waste management organizations, and colleges and universities.

http://www.peercenter.net

Public Sector Case Studies—EPA EMS Program

Case studies of environmental management systems within state, local, and federal government agencies.

http://www.epa.gov/EMS/resources/casestudies/publicsector.htm#federal

Organizations and Programs

Climate Friendly Parks

A joint partnership between the EPA and the National Park Service through which parks around the country are leading the way in the effort to protect their natural and cultural resources.

http://www.nps.gov/climatefriendlyparks

Western Governors' Association

Addresses important policy and governance issues in the West, with a focus on natural resources and the environment.

http://www.westgov.org

Environmental Council of the States

A national nonprofit, nonpartisan association of state and territorial environmental agency leaders. Provides numerous resources for state governments.

http://www.ecos.org

State, Local, and Federal Examples

Greening the Department of the Interior

The Department of the Interior (DOI) operates an extensive greening program. Learn about what DOI is doing in energy, water, buildings, vehicles, and more.

http://www.doi.gov/greening/index.html

Washington State General Administration—Sustainability Web Site

Offers an overview of Washington's initiatives, including its sustainability plan and progress reports and information on the Interagency Sustainability Committee, consisting of sustainability coordinators from at least 40 state agencies.

http://www.ga.wa.gov/Sustainability/index.html

Forest Service Rocky Mountain Region—Sustainability

Profiles the region's efforts to reduce its consumption level and impacts on the Earth's increasingly finite resources in the areas of fleets, waste reduction, energy, water conservation, green purchasing, and more.

http://www.fs.fed.us/r2/sustainable_operations/index.shtml

Greening EPA

Provides a wealth of information about EPA's internal programs in the areas of energy efficiency, renewable energy, water conservation, waste reduction, transportation, chemical use reduction, and sustainable facility design and construction.

http://www.epa.gov/oaintrnt/index.htm

National Park Service—Environmental Leadership

Profiles numerous sustainability initiatives within the national parks.

http://www.nps.gov/piro/parkmgmt/environmental-leadership.htm

N.C. Project Green

A response to North Carolina Executive Order 156, which was issued in 1998 and challenges state government to set an example of environmental stewardship. The project's Web site provides access to legislation, case studies, resources, and news across each of the project focus areas: energy, water, buildings, waste reduction, transportation, and procurement.

http://www.ncprojectgreen.com

The Greening the Government fact sheet series was created by U.S. EPA Region 8.