

FINAL

**Green Procurement Program Plan
Marine Corps Air Station Miramar
and
Geographically Separated Units**



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Introduction

The goal of a Green Procurement Program (GPP) Plan is to consolidate all of the requirements involved in the GPP in order to make Green Procurement (GP) easy to understand and implement. The GPP Plan identifies organizations involved in GP, their responsibilities under the program and establishes a Green Procurement Team (GPT) where all organizations involved in GP seek to find continuity in all aspects of the program including: training and awareness, communication strategies, purchasing document control, GP processes and forms, metrics and reporting, performance measures, and management review. The GPP Plan also provides instructions on integrating the plan into the Marine Corps Air Station (MCAS) Miramar's Environmental Management System (EMS) to meet Federal procurement requirements. The MCAS Miramar GPP Plan serves as a directive establishing a base program with a specific course of action and priorities of how the installation will achieve its goals and targets for green purchasing.

In August 2004, DoD significantly broadened the focus of the existing preference purchasing programs by issuing new GPP policy, strategy, and metrics. The DoD GPP policy defines "GP" as the "purchase of environmentally preferable products and services in accordance with federally mandated 'green' procurement preference programs." These programs are the result of laws, regulations, and executive orders.

In January 2007, Executive Order (EO) 13423 "Strengthening Federal Environmental, Energy, and Transportation Management" was signed, consolidating the existing preference purchasing programs, energy-efficient and water-conserving programs, and sustainable design requirements into one program. This Plan covers the following GPP elements:

- Recovered Material (Affirmative Procurement)
- Energy Efficient
- Alternative fuels/alternative fueled vehicles
- Biobased Products
- Non-ozone depleting substances
- Environmentally preferable products

With the exception of the USDA Biobased Product Program that is still being defined, none of the GPP elements are new initiatives. No responsibilities have changed as a result of GPP DoD policy. The intent of this Plan is to consolidate all EO 13423 requirements that pertain to the GPP, so that purchasers may understand and execute them more efficiently.

GP applies to all MCAS Miramar facilities and operations, except military tactical vehicles and equipment. Military tactical vehicles and equipment include weapon systems used on the battle ground, portable equipment that supports logistical and combat aircraft, vehicles to transport combat and support personnel during military operations, and other military equipment weapon systems.

Additionally, this Plan shows how to meet Federal procurement and reporting goals and document GP practices in the MCAS Miramar Environmental Management System (EMS). EMS follows a "Plan, Do, Check, Act" cycle. This Plan has been structured in the same way.

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1.0 Legal and Regulatory Policy Requirements

The Federal government is one of the largest purchasers in the world. Federal Procurement Data System-Next Generation (FPDS-NG) data shows that in 2007, 60 Federal agencies spent more than \$250 billion for goods and services. These Federal agencies spent an additional \$15 billion on micro-purchases using Government-wide Commercial Purchase Cards (GCPC). Over half of the purchases reported in the FPDS-NG were made by DoD agencies. With such purchasing power, Department of the Navy (DON) has a tremendous opportunity - and an obligation - to be responsible environmental stewards by choosing green products. Below are highlights of key drivers.

1.1 Laws, Regulations, and Executive Orders

1.1.1 Resource Conservation and Recovery Act (RCRA) Section 6002(i)

RCRA acknowledges the importance of recycling in managing the Nation's solid waste. Congress further recognizes that recycling does not end with the collection of materials, but also includes the manufacture of recycled content products that can be purchased and used by consumers.

40 CFR Part 247 Comprehensive Procurement Guidelines (CPG) for Products Containing Recovered Materials covers a wide range of subjects including recycling and affirmative procurement and supports compliance of Section 6002 of RCRA. The CPG addresses the recovered material (or recycled content) of Environmental Protection Agency (EPA)-designated items. Included are:

- paper and paper products;
- non-paper office products;
- vehicular fleet maintenance products (re-refined lubricating oils and antifreeze, rebuilt automotive parts, retread tires);
- construction products;
- landscaping products;
- traffic control products;
- park and recreation products; and
- miscellaneous products.

1.1.2 Clean Air Act (CAA) Section 612

The CAA specifies a policy to replace Class I and Class II substances by product substitutes, or alternative manufacturing processes that reduce overall risks to human health and the environment.

40 CFR Part 82 implements the Montreal Protocol on Substances that Deplete the Ozone Layer, and sections 602, 603, 604, 605, 606, 607, 614 and 616 of the CAA Amendments of 1990. The Protocol and section 604 impose limits on the production and consumption (defined as production plus imports minus exports, excluding transshipments and used controlled substances) of certain ozone-depleting substances (ODS) according to specified schedules. The Montreal Protocol also requires each nation that becomes a Party to the agreement to impose certain restrictions on trade in ODS with non-Parties.

1.1.3 Farm Security and Rural Investment Act of 2002 Section 9002

This act requires Federal agencies to show preferences for biobased products. The United States Department of Agriculture (USDA) is responsible for designating products for mandatory procurement preference and is accomplishing this through a series of rulemaking actions over several years.

1.1.4 Energy Policy Act of 1992, as amended by Energy Policy Act of 2005

The goal of the Energy Policy Act of 1992 is to enhance our nation's energy security, and improve environmental quality. To meet this goal, the Act requires the acquisition and use of alternative-fueled vehicles. It mandates 75% of light-duty vehicles acquired in a fiscal year by Federal agencies be alternative-fueled vehicles.

The Energy Policy Act of 2005 (EPAct 2005) Section 701 requires Federal agencies to use alternative fuels in dual-fueled vehicles unless the Secretary of Energy determines an agency qualifies for a waiver.

EPAct 2005 Section 104 addresses Federal procurement and energy-efficient products. It requires Federal agencies to procure only energy-efficient products listed by Energy Star® or designated by the Department of Energy's Federal Energy Management Program (FEMP) when purchasing covered products, subject to certain exceptions. The Act requires that these energy-efficient products be "clearly identified and prominently displayed in any inventory or listing of products by the General Services Administration (GSA)." EPAct 2005 Section 943 addresses the procurement of biobased products.

1.1.5 FY 2003 National Defense Authorization Act (NDAA) Section 314

This act calls for the Defense Logistics Agency (DLA) to develop tracking systems and training related to the procurement of environmentally preferable product (EPP) items.

1.1.6. FY 2008 National Defense Authorization Act Section 888

NDAA specifies that DoD should establish a system to document and track the use of EPPs and services. The Secretary of Defense is to submit to Congress a report on a plan to increase the usage of EPPs and minimize potential impacts to human health and the environment at all DoD facilities inside and outside the United States (U.S.), including through the direct purchase of products and the purchase of products by facility maintenance contractors. The report is to cover consideration of the budgetary impact of implementation of the plan.

1.1.7 Executive Order (EO) 13423 Strengthening Federal Environmental, Energy, and Transportation Management

EO 13423 requires Federal agencies to set goals to improve environmental, transportation, and energy-related activities in support of their missions. These goals address:

- Improving energy efficiency and reducing greenhouse gas emissions;
- Ensuring that at least half of the energy consumed is from renewable energy sources;
- Reducing water consumption intensity;

- Purchasing biobased, environmentally preferable, energy-efficient and water conserving, and recovered material content products;
- Ensuring the agency reduces the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed;
- Minimizing the use of petroleum based fuel in their fleets
- Ensuring that new construction and major renovations comply with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (2006); and
- Whenever possible, acquiring EPEAT products, ensuring Energy Star® features on agency computers and monitors; implementing policies to extend the useful life of electronic equipment; and using environmentally sound practices with respect to the disposal of electronic equipment that has reached the end of its useful life.

EO 13423 revoked EOs 13101, 13123, 13134, 13148 and 13149. EO 13423 only provides National goals. EO 13423 Implementing Instructions include the requirements from the revoked orders.

1.1.8 Executive Order 13221 Energy Efficient Standby Power Devices

EO 13221 requires agencies to purchase devices that use no more than one watt of energy in the standby power consuming mode.

1.1.9 Federal Acquisition Regulation (FAR)

FARs are included in contracts to ensure products and services meet GPP-specific requirements. FAR governs Federal agencies and DLA in the following subparts:

- FAR 23.2 - Energy and Water Efficiency and Renewable Energy;
- FAR 23.4 - Use of Recovered Material and Biobased Products;
- FAR 23.7 - Environmentally Preferable and Energy-Efficient Products and Services; and
- FAR 23.8 - Ozone Depleting Substances.

1.2 DoD Policy

On August 27, 2004, the Under Secretary of Defense issued a policy memorandum entitled *Establishment of the DoD Green Procurement Program (GPP)*. The policy states: "The DoD goal is to achieve 100% compliance with mandatory Federal GPP programs in all acquisition transactions." This goal applies to all acquisitions from major systems programs to individual unit supply and service requisitions. As part of this policy, the DoD also developed the Green Procurement Strategy to provide guidance to the services on achieving this goal. The strategy provides DoD requirements for GP management, defines GP roles and responsibilities, and provides sources of training and DoD metrics.

DoD metrics for tracking progress toward the DoD's GPP goal for EPA-designated items include:

- Reducing the number of "E" codes and increasing the number of "A" codes on FPDS-NG Contract Action Report. The "A" code means EPA-designated items were acquired and all contained the required minimum recovered material content. "E" code means no EPA-designated items were acquired.

- Increasing the percentage of purchases of EPA-designated indicator items based on the number of all similar purchases in each category. Indicator items measured for include:
 - Sanitary tissue products;
 - Toner cartridges;
 - Construction products;
 - Landscaping timbers;
 - Park benches/picnic tables;
 - Traffic barricades;
 - Engine lubricating oil;
 - Signage; and
 - Increasing the percentage of contracting personnel trained in green procurement.

1.3 DON Policy

On January 22, 2007, the Assistant Secretary of the Navy-Installations and Environment (ASN I&E) and the Assistant Secretary of the Navy-Research, Development and Acquisition (ASN RDA) jointly endorsed the DoD GPP Strategy. DON requires use of green products and services to the maximum extent practicable, consistent with the requirements of relevant Federal procurement preference programs.

The Navy "Environmental and Natural Resources Program Manual" (OPNAVINST 5090.1C, Chapters 4, 8, and 16), as well as the Marine Corps' "Environmental Compliance and Protection Manual (Marine Corps Order P5090.2A Change 1) both incorporate the GP policy.

Naval Facilities Engineering Command (NAVFAC) Planning and Design Policy Statement 98-04 entitled, "Participation in the Affirmative Procurement of EPA Designated Products," and NAVFAC INST 9830.1, "Sustainable Development Policy," additionally address the DON's GPP elements.

To support GPP, contracting and purchasing personnel receive GPP training on all six product areas through local sources, Navy Schools, Defense Acquisition University, DLA's Buying Green Workshop, General Services Administration (GSA) representative briefings, and online sources. These sources include:

- Office of Personnel Management Green Purchasing on the USA Learning website (www.usalearning.gov/USALearning/about_welcome_archives_14.htm); and
- NAVSUP's DON Consolidated Card Program Management Division (CCPMD) website (www.navsop.navy.mil/ccpmdh).

The DON's policy is to make GPP a way of life. This Plan will assist field activities to develop a robust GPP. All MCAS Miramar personnel are responsible for implementing the MCAS Miramar GPP including requirements developers, contracting officers, and GCPC.

In addition, the MCAS Miramar GPP applies to construction contracts, service contracts, commodity purchase, items purchased from MCAS Miramar supply stores and all other micro-purchases. Further guidance on Green Procurement can be found at www.epa.gov/cpg/products.htm.

2.0 Defining the Elements of Green Procurement

The following sections provide specific information on what types of products are included under each of the GP elements and what commodities may be affected. Information on where to purchase items that meet the requirements of the GP program may be found in Appendix B.

2.1 Procuring GP Elements

MCAS Miramar personnel shall consider green products and/or services as the first choice in all procurement, including service contracts. They shall purchase green products when planning to purchase products and/or services in the following categories (note that this list is not all inclusive):

- Office products (including electronic equipment)
- Printing services
- Fleet maintenance products
- Building construction, renovation and maintenance (including janitorial and landscape)
- Traffic control
- Park and recreation
- Appliances
- Lighting

The use of established Federal supply sources is an advantageous method for the purchase of green products. Federal supply sources include DLA, GSA and the Defense Automated Printing Service (DAPS). Procuring items through these sources offers the advantage of competitive bidding, compliance with EPA minimum content thresholds for recovered materials, and central tracking. These sources also provide an additional service through independent estimation, certification, and verification of EPA-designated items containing recovered material, thereby reducing overhead costs for buyers to monitor vendor compliance with affirmative procurement requirements. If you elect to purchase green products outside of a Federal supply source, then additional tracking and reporting is required.

For items not available through Federal supply sources, GPP requirements must be incorporated during the acquisition planning phase. In developing plans, drawings, statements of work, specifications or other product descriptions, the following factors must be incorporated:

- energy and water efficiency;
- elimination of virgin material requirements;
- use of recovered materials or biobased components;
- reused product (e.g. baled rags);
- analysis of life-cycle cost;
- use of EPPs;
- waste prevention (including reduction or elimination of hazardous waste); and
- ultimate disposal considerations.

For contractors, MCAS Miramar must ensure appropriate new contracts contain GPP compliance provisions, and appropriate existing contracts are modified to include GPP compliance provisions. Related procurement policy will be provided to MCAS Miramar's

contractors in their contracts, which will include FAR 52.223-4, Recovered Material Certification, and FAR 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated products and will address energy-efficient and biobased issues as appropriate. MCAS Miramar's contractors who procure a majority of the products regulated by USDA and DoE should be made aware of GPP requirements.

Since contractors are purchasing goods and services on MCAS Miramar's behalf, they need detailed statements of work for implementing the MCAS Miramar's GPP procurement policies. For example, construction contracts should include the requirement to use concrete containing fly ash or ground granulated blast furnace slag as well as building insulation containing recovered material.

Once appropriate provisions or clauses are included in each contract, the contractor is required to comply with MCAS Miramar's GPP as if the contractor were that entity. Hence, the contractor will be required to monitor and report on its GPP activities as well as require its applicable subcontractors to comply with MCAS Miramar's GPP.

With respect to waste prevention, the statements of work should state that the contractors will use recycled-content paper according to current EPA thresholds. Contracts should specify that any documents submitted during the performance of a contract will be printed on both sides, and any copies of the documents will be copied on both sides of papers submitted during the term of the contract.

2.1.1 Exceptions and Waivers

Decisions not to procure green products subject to certain Federal procurement preferences must be documented as described below.

Any decision not to procure items meeting EPA guideline standards shall be justified in writing if the purchase is greater than the micro-purchase threshold (i.e., greater than \$3,000). A waiver is appropriate only if the items are:

- Not available competitively;
- Not available within a reasonable time frame;
- Unable to meet appropriate performance standards or functional requirements; or
- Only available at an unreasonable price (see definition of "unreasonable price").

The contracting officer must place in the contract file a written justification if an acquisition of EPA-designated products above the micro-purchase threshold does not contain recovered material. For installation acquisitions, a Request for Waiver or Exception Form should be used. A waiver form can be found in Appendix E. For stock or mission acquisitions, a locally developed form may also be used. In all cases, the original form/justification becomes part of the official contract file.

Exception requirements for biobased and energy efficient products are similar to those for the recycled content products and the Request for Waiver or Exception Form may be used. Key differences are that these programs generally exclude combat-related products; and for energy-efficient products, the unreasonable price determination must consider energy costs throughout the life cycle, using the life-cycle cost analysis methods prescribed by 10 CFR part 436, subpart A.

2.1.2 Source of Purchasing GP Products

When accessing the DoD EMALL (<https://emall6.prod.dodonline.net>) the  appears beside all GP products, along with two capital letters that designate a specific environmental attribute code (ENAC). Each of the 137 ENACs defines the category to which it applies. For example, the designation “EB” designates the environmental product re-refined lubricating oil. For a complete list of DoD EMALL ENACS, see Appendix C.

When accessing GSA Advantage (<https://www.gsaadvantage.gov>), each GP category is represented by a different symbol and does not list an ENAC. For example, recovered materials products are represented by .

NOTE: DoD EMALL and GSA Advantage apply different symbols to each of their environmental products.

Table 2-1 discusses the Sources of Supply (SoS) for each applicable MCAS Miramar Organization. Note that any of the GP sources of purchasing mentioned in this Plan are viable and can be used as necessary.

Table 2-1. GP Sources of Purchasing for MCAS Miramar Organizations

Organization	Source of Purchasing
<p>S-4 Facilities and Logistics</p>	<ul style="list-style-type: none"> • DoD EMALL • GSA Advantage • ServMart • <i>All hazardous material purchases are processed through the HAZMIN Center.</i>
<p>S-6 Communications, Electronics, and Data</p>	<ul style="list-style-type: none"> • DoD EMALL • GSA Advantage • ServMart • <i>All hazardous material purchases are processed through the HAZMIN Center.</i>
<p>S-7 Environmental Management Division</p>	<ul style="list-style-type: none"> • DoD EMALL • GSA Advantage • ServMart • <i>All hazardous material purchases are processed through the HAZMIN Center.</i>
<p>Contracting</p>	<ul style="list-style-type: none"> • DoD EMALL • GSA Advantage • ServMart • <i>All hazardous material purchases are processed through the HAZMIN Center.</i>

Organization	Source of Purchasing
Provost Marshall Office (PMO)	<ul style="list-style-type: none"> • DoD EMALL • GSA Advantage • ServMart • <i>All hazardous material purchases are processed through the HAZMIN Center.</i>
Southwest Region Fleet Transportation (SWRFT)	<ul style="list-style-type: none"> • Consolidated Material Supply Center (CMSC), located at Camp Pendleton • <i>All hazardous material purchases are processed through Camp Pendleton or through the HAZMIN Center at MCAS Miramar.</i>
Marine Corps Community Services (MCCS)	<ul style="list-style-type: none"> • DoD EMALL • GSA Advantage • ServMart • <i>All hazardous material purchases are processed through the HAZMIN Center.</i>
Hazardous Waste Minimization (HAZMIN) Center	<ul style="list-style-type: none"> • DoD EMALL • GSA Advantage • ServMart
Naval Consolidated Brig (NAVCONBRIG)	<ul style="list-style-type: none"> • Fleet Industrial Supply Center (FISC) • GSA Advantage • JWOD • <i>All hazardous material purchases are processed through the HAZMIN Center.</i>
Defense Commissary Agency (DeCA)	<p><i>DeCA is an independent tenant on MCAS Miramar that receives funding and guidance from a separate source. MCAS Miramar's GPP is not applicable to DeCA, DeCA's employees, and/or DeCA's procurement procedures.</i></p>

2.2 Recovered Material (Affirmative Procurement)

2.2.1 What to purchase.

The CPG program is authorized by Congress under Section 6002 of the Resource Conservation and Recovery Act (RCRA), Title 40 of the Code of Federal Regulations Part 247, and EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*.

EPA is required to designate items (EPA-designated items) that are or can be made with recovered material, and recommend practices for buying these products. Once items are designated, procuring agencies are required to purchase the EPA-designated items with the highest recovered material content level practicable. The requirements for purchasers of EPA

CPG items apply almost exclusively to the Contiguous United States (CONUS) installations. Installations outside the Contiguous United States (OCONUS) are encouraged, but not required, to buy recycled-content products locally whenever these products meet technical needs, are readily available, and are cost effective. OCONUS installations are not required to have a formal GPP program.

NOTE: The key requirement for OCONUS installations to be aware of is that **all purchases made in the U.S. for shipment overseas must comply with EPA CPG requirements.**

The EPA-designated items covered by the CPG are listed on the CPG website (www.epa.gov/cpg) and are also itemized on the recovered material determination form (RMDF). The RMDF can be found at Appendix E.

2.2.2 What commodities are affected?

Affected commodities include:

- Office supplies to include printing and copier paper;
- Building construction, renovation, and maintenance project materials;
- Materials used in base services including custodial, grounds maintenance, copier maintenance, and document printing;
- Materials used in vehicle maintenance activities;
- Traffic control devices; and
- Park and recreation products.

Recovered material requirements apply to all EPA-designated item acquisitions (including simplified acquisitions) purchased with Federal funding, no matter what purchasing or payment mechanism is used.

2.3 Energy Efficient (FEMP, Energy Star®, and EPEAT)

2.3.1 What to purchase.

Energy-efficient product purchases are *mandatory* elements of the DON GPP.

2.3.2 What commodities are affected?

Energy-efficient requirements affect all purchases of computers, monitors, printers, scanners, fax machines, and copiers; building construction, renovation and maintenance projects; and purchases of appliances. Water-efficient requirements apply to building construction and renovation projects. Federal agencies are required to procure energy efficient products qualified in the Energy Star® program or designated by Federal Energy Management Program (FEMP). Energy Star® is a voluntary partnership between the Department of Energy (DoE), EPA, product manufacturers, local utilities and retailers. The partnership promotes the use of energy efficient products and educates consumers about the DON benefits of energy efficiency. For details, see www.energystar.gov/.

FEMP is a DoE program that works to advance energy and water efficiency in Federal agencies. Federal agencies are also required to procure devices that use no more than one watt of energy in the standby power consuming mode.

The Electronic Product Environmental Assessment Tool (EPEAT) is a procurement tool to help purchasers evaluate, compare, and select desktop computers, notebooks, and monitors based on their environmental attributes. EPEAT also provides a clear and consistent set of performance criteria for the design of products, and provides an opportunity for manufacturers to secure market recognition for efforts to reduce the environmental impact of its products. It may be accessed at www.epeat.net.

2.4 Alternative Fuels/Alternative Fueled Vehicles

2.4.1 What to Purchase

Federal agencies must acquire alternative fueled vehicles (AFVs), alternative fuels for those vehicles, and fuel-efficient petroleum-powered passenger cars and light trucks. Alternative fuels defined by EPCRA 2005 and subsequent legislation, include biodiesel, electricity, ethanol, hydrogen, natural gas, and propane. The Defense Energy Support Center (DESC) provides information through the Alternative Fuels Information Station (AFIS). This site contains tutorials about EPCRA 2005 requirements, ethanol, biodiesel, and alternative fuel logistics. DESC will post other tutorials as they become available.

Additionally, DoE's Clean Cities Program coordinates efforts between government and industry to accelerate the use of alternative fuels and expand the AFV refueling infrastructure. Their Alternative Fuels and Advanced Vehicles Data Center, which can be accessed at www.afdc.energy.gov/afdc/, is a comprehensive resource for alternative fuel and vehicle information needs. This site has more than 3,000 documents in its database, an interactive fuel station mapping system, listings of available AFVs, links to related websites, and much more.

Biobased fuels should be used as an alternative to petroleum fuels in non-tactical vehicles and support equipment operation at locations where fuel will be consumed within six months. Typical shops include motor pools, public works, golf courses, and auto hobby shops.

Military tactical vehicles, which are exempt from GPP requirements, are defined as operating military tactical vehicles and equipment to include weapon systems used on the battle ground, portable equipment to support logistics and combat aircraft, vehicles to transport combat and support personnel during military operations, and other military equipment weapon systems. Most of these vehicles/equipment are designed to unique military specifications, but some are commercially designed.

2.4.2 What commodities are affected?

This element of the GPP affects the acquisition of light, medium, and heavy-duty motor vehicles (other than military tactical, law enforcement and emergency vehicles), and the purchase of fuel that is used in AFVs. EO 13423 Implementing Instructions (March 2007) provide guidance on applicability and exemptions to the vehicle fleet management goal.

It states:

1. Applicability and Exemptions

All agencies that operate 20 or more motor vehicles within the U.S. must comply with these instructions. Each such agency shall, when calculating the replacement or reduction levels required in section 2(g) of the E.O., include fuel use from all vehicles, including light-duty, medium-duty, and heavy-duty vehicles unless such vehicles meet the following exemptions or the agency applies for exemptions in accordance with Section 8 of the E.O. (DoE will determine if vehicles have been properly exempted by auditing the data agencies provide in the Federal Automotive Statistical Tool (FAST)):

- a. Motor vehicles used for motor vehicle manufacturer product evaluations or tests.*
- b. Law enforcement and emergency vehicles, including those vehicles that are used in an emergency capacity, by the agency, greater than 75 percent of the year. Agencies with vehicles meeting this definition (as approved by DoE) will have a baseline (and related record-keeping) adjustment to reflect this change.*
- c. Military tactical vehicles, defined as motor vehicles (excluding general purpose motor vehicles) designed to military specification or a commercially designed motor vehicle modified to military specification to meet direct transportation support of combat or tactical operations and protection of nuclear weapons. These vehicles are inherently mission-critical and are used for no other purpose.*
- d. Vehicles owned and operated by the Central Intelligence Agency.*
- e. Vehicles that are not licensed for use on all roads and highways.*
- f. Federally owned vehicles operated solely by Indian nations or state-run Fish and Wildlife services, as applicable.*
- g. Vehicles operated outside of the U.S.*

2.5 Biobased Products

2.5.1 What to Purchase

Biobased items include, but are not limited to, clothing, bedding, linens; office products; printing products; transportation fleet maintenance products; construction products; and janitorial and landscaping products. USDA maintains the Bio-Preferred Program website (www.biopreferred.gov). It is the source of information on USDA biobased products designated for preferred procurement. Biobased products may also be found by accessing the following website (www.ofee.gov/gp/bioprod.asp).

There will be some overlap between the EPA-designated items, alternative fuels, and the new USDA list for biobased items. USDA states that procurements subject to CPG requirements (EPA-designated items) do not also have to satisfy the new biobased product requirements, if the two sets of requirements are inconsistent. However, this does not mean that EPA-designated items must automatically be purchased in place of biobased purchases. Purchasers should look at the benefits and costs of products and select the one that provides the best value overall.

2.6 Non-ozone Depleting Substances

2.6.1 What to Purchase.

Under Section 612 of the CAA, EPA was authorized to identify and restrict the use of substitutes for Class I and Class II ODS. As a result, the EPA created the Significant New Alternatives Policy (SNAP) program. Navy-Marine Corps Procurement Offices should select alternatives that are EPA-SNAP approved after checking with the Environmental Managers for compliance with more stringent State and local regulations.

The SNAP program covers refrigeration and air conditioning; foam insulation; cleaning solvents; fire suppressants; aerosol solvents and propellants; sterilants; and adhesives, coatings and inks.

The SNAP website (www.epa.gov/ozone/snap/lists/index.html) identifies alternatives to ODS products and provides lists of acceptable and unacceptable substitutes. Alternatives shall meet EPA, State, and local performance requirements and be commercially available. The list of acceptable and unacceptable ODS products may be modified as required by the Installation Environmental Manager to ensure compliance with more strict air quality regulations.

Before installing ODS substitutes in air conditioning and refrigeration systems, always follow the original equipment manufacturer recommendations. Some substitutes may result in reduction in equipment capacities and changes in operating temperatures.

2.6.2 What commodities are affected?

Commodities affected are building construction, renovation and maintenance products; products for metals cleaning, electronics cleaning and precision cleaning; and products used in fire suppression systems may all contain ODS.

2.7 Environmentally Preferable Products (EPPs)

2.7.1 What to Purchase.

EPPs are any products and services that are more environmentally friendly than what MCAS Miramar routinely purchases, but are not already covered by one of the other programs already described. DLA leads a program to improve opportunities for Federal purchasers to buy EPPs. DLA chairs a working group that is tasked to:

- Increase the number of EPPs available through the Federal supply system;
- Define a series of Environmental Attributes (criteria) to be applied to products;
- Encourage small business and other industries to manufacture, identify, and provide products and services to DoD that have less environmental impact and lessen hazardous waste generation.

2.7.2 What commodities are affected?

All MCAS Miramar organizations that acquire products or services should consider the environmental impacts that are created by those products and services, and look for ways to minimize these impacts. EPP purchasing is required in the Federal sector and seeks products and services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose.

This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance or disposal of the product or service. Unlike the mandates for recycled content, biobased, and energy efficiency, there is no designated list of covered EPPs or a requirement for waiver.

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3.0 Implementing a Green Procurement Program Plan

To satisfy several programmatic requirements, MCAS Miramar shall formally establish policy indicating its preference for acquiring EPPs. This GPP Plan spells out the actions that will be taken to promote, execute, and measure the GPP program.

3.1 MCAS Miramar Green Procurement Policy

The MCAS Miramar GP policy (Appendix A) demonstrates commitment, provides direction for all personnel and fulfills an environmental management system (EMS) requirement. It also fulfills two legal requirements found in RCRA and the Farm Bill. MCAS Miramar shall maintain waste prevention and recycling programs in all its facilities in the most cost-effective manner possible, and where appropriate, leased facilities and facilities managed by GSA.

3.2 GPT – Roles and Responsibilities

DoD's 27 Aug 2004 GPP policy assigns responsibility for GPP compliance by stating:

“Each organization initiating contracting/procurement actions or credit card purchases is responsible for complying with GPP purchasing mandates. Environmental and procurement offices across the Department will support organizations in meeting these mandates.”

The GPP roles and responsibilities will be assigned at the direction of the Installation Commander in accordance with the MCAS Miramar EMS, as applicable. The GPT should identify a single point of contact responsible for coordinating GPP data that is collected and report to Marine Corps POCs. It charters a team to manage and execute the action items. The team either establishes a new cross-functional GPT or assigns the GPP to an existing cross-functional team. The key members of this team may represent the Environmental Management Division, Contracting, Public Works/Facilities Maintenance Office, and Operations. The team also includes the MCAS Miramar Energy Manager; Southwest Region Fleet Transportation (SWRFT) Manager, or personnel who are responsible for purchasing vehicles and fuels; and the MCAS Miramar P2 program manager. The Public Affairs and Legal offices provide support to the team. Although MCAS Miramar tenants are often responsible for their own programs, they may also be invited to participate in the GPT to maximize coordination and information cross-feed.

The GPT is responsible for developing a GPP Plan that is used to manage the GPP program. It should be noted that for the people described below these may be additional duties. If the activity or installation does not have a full complement of these functions, the activity or installation should coordinate this effort with their senior leadership to ensure these roles and responsibilities are addressed. Typical responsibilities for the different organizations at an MCAS Miramar are as follows:

- **Contracting Officers** ensure compliance with the Federal Acquisition Regulation (FAR), Defense Federal Acquisition Regulation Supplement (DFARS), and Navy Marine Corps Acquisition Regulations Supplement (NMCARS). They shall ensure the use of the appropriate acquisition clauses, addressing energy and water efficiency, alternative fuels

and fuel efficiency, biobased product acquisition, non-ODS and EPPs. Contracting officers also insert the correct FAR clauses in all contracts that use any of the designated CPG items and track and report information for the recycled-content product purchasing metrics using the FPDS-NG, Contract Action Report.

- **Government Purchase Card Program Manager (GCPC PM)** ensures that all cardholders and approving officials receive training that includes GPP requirements. The GPP is discussed in all GCPC training sessions, using briefing slides provided by the Environmental Management Office. The GCPC Program Manager and the approving officials are also responsible for annual surveillance to ensure cardholders are meeting GCPC program requirements, including GPP compliance.
- **Project Managers** are responsible for specifying green products to be included in all service contracts and construction projects whether they are in-house or contracted out. The Project Managers and **Quality Assurance Evaluator (QAE)** must understand the full spectrum of GPP requirements. Whenever a construction project or service contract requires a contractor to provide one or more of the affected items, the Project Managers must ensure that the project specifications or performance work statement include a requirement for the contractor to purchase or provide, use and report a listing of all products (FAR 23.400 and 23.700) that meet the requirements in Section 2 of this Plan. The QAE then ensures that the GPP requirements in the specifications or PWS are met.
- **Supply stores** are usually operated by AbilityOne according to the terms of the applicable Support Agreement (SA). Each time an SA is updated, it is distributed to Environmental Management Division for comment. The Environmental Management Division reviews and comments on the agreements, and ensures that GPP requirements are clearly identified for the products stocked in MCAS Miramar supply stores.
- **Environmental Management Division** provides technical guidance, explaining the program requirements and helping buyers to identify green products. Upon request from Public Works/Facility Maintenance Officer, review of project specifications for GPP compliance is accomplished by the environmental office. The Environmental Management Division will assist in the GPP website development, in completing the appropriate EMS documentation requirements, and in providing information for GPP training.
- **Energy Manager** guides the GPP team in setting and achieving energy-related targets and translating these targets into specific actions for the GPP Plan. Targets must include Energy Star ® products.
- **Southwest Region Fleet Transportation (SWRFT) office** manages the AFV and alternative fuel program element of the GPP. As part of this responsibility, they will guide the GPP in setting and achieving appropriate targets and integrating them into the MCAS Miramar GPP Plan.
- **Legal offices** support the GPP by reviewing program activities for appropriate legal requirements.
- **Public Affairs offices** support GPP by promoting the program to MCAS Miramar personnel.

In the Planning phase of the EMS, MCAS Miramar identifies areas that significantly affect the environment. It sets goals and creates plans for managing these impacts. GP is one of the issues that MCAS Miramar will include in the list of significant areas – or, in EMS terminology, as one of MCAS Miramar’s significant environmental aspects. When procurement is included as a significant environmental aspect, the EMS process takes over to ensure that the GPP is carried out effectively, meets all legal requirements, and becomes a tool for improving MCAS Miramar’s overall environmental performance.

3.3 Incorporating Purchasing into an EMS

The MCAS Miramar EMS provides a systematic approach to integrating environmental considerations into mission decisions and operations, while continuing to improve on MCAS Miramar’s environmental compliance posture. The current MCAS Miramar EMS Manual is located at www.miramar.usmc.mil/ems/ems/default.htm. The MCAS Miramar GPP website will be located under the Waste Management Division section located at www.miramar.usmc.mil/ems/environmental_programs/default.htm.

Purchasing decisions have an indirect impact on the environmental performance of MCAS Miramar. Through contracting and procurement, MCAS Miramar personnel have the ability to manage and control the waste and emissions generated during mission activities conducted by installation personnel and their contractors. GP has a number of benefits that help the mission be accomplished more effectively. For example, at the end of its life cycle, hazardous material that is purchased becomes a hazardous waste that is costly to manage and dispose. When products, designs, or buildings that are not energy efficient are purchased, a higher utility bill is paid. Higher utility bills contribute to regional air pollution – which in turn may affect the air permit program, limiting the amount of air emissions that mission-essential operations are allowed to produce. Products and systems that are not water efficient drive up costs for water purchase and wastewater treatment. Products that are not energy efficient cost more to operate – wasting funds that could have been used for mission requirements.

The goal of the GPP is to use procurement practices to avoid these costs and impacts. Contracting actions of all types (including GCPC) may be used to obtain products and services that have less impact on the environment. To understand how broadly the GPP applies to MCAS Miramar, consider the following:

GP requirements affect all purchases of goods and services made by MCAS Miramar personnel and their contractors – no matter how they are purchased, or the dollar value of the purchase. GP requirements apply to everything from simplified acquisition GCPC micro-purchases, up to major weapon system acquisition contracts. All personnel who purchase items, write contract specifications, or write performance work statements for service contracts must know the GPP requirements and comply with them.

3.4 Objectives and Targets for GPP

Now that GP has been defined as a significant environmental aspect of the MCAS Miramar’s EMS, the next step is to set objectives and targets for meeting the goals of MCAS Miramar’s GPP. Objectives are long-term goals that MCAS Miramar sets out to achieve and which reflect the principles established in its environmental policy. Targets are short-term goals that move toward achieving the environmental objectives. Targets are specific and measurable and must

be assigned a specific timeframe for completion. At least one target must be established for each objective.

MCAS Miramar’s objectives are defined in accordance with legal requirements and DoD policy. The objective of the DoD GPP Policy, described in Section 1.1, is 100% compliance with all mandatory GPP elements in all acquisition transactions – from major systems programs to individual unit supply and service requisitions. The DoD policy requires continual improvement in GPP performance, but sets no deadline for 100% compliance.

All GP EO 13423 objectives and targets will be incorporated into the MCAS Miramar EMS as applicable. MCAS Miramar GPP policy echoes the DoD goals and explains the training requirements for MCAS Miramar personnel. The policy, like the DoD policy, does not require specific timelines for meeting the overall DoD objective. This leaves the MCAS Miramar GPT free to establish their own targets (short-term goals) to work toward the long-term objective of 100% compliance for all GPP elements. The targets do not have to be the same for every GPP element. For example, the buy recovered materials (EPA-designated items) program is more mature, and is a candidate for aggressive targets, while the biobased program is still in the process of being defined. Instead of choosing generic targets such as “comply with all EPA regulations by a certain date,” consider setting a target for each of the actions that is required to implement a successful GPP – including policy, training, operational controls (forms and standard operating procedures), auditing, and conducting management review. Targets should also be assigned to members of the GPT, based on the nature of the target, so individuals may routinely monitor the progress.

MCAS Miramar GPP targets include statements such as the following (and include target dates):

In addition, a review of GPP compliance as part of the annual Environmental Quality Assessment/ Environmental Compliance Evaluation (EQA/ECE) audit should be conducted. DON checklists will be updated to include GP requirements. Any discrepancies identified should be provided to the GPT for their use in the annual GPP program review.

3.4.1 GPP Targets

Table 3.1 establishes GPP targets for MCAS Miramar, along with the suggested responsible personnel and suggested completion dates.

Table 3-1. MCAS Miramar GPP Targets

Target	Responsibility
Produce the MCAS Miramar GP policy to include all applicable GPP elements.	<ul style="list-style-type: none"> • GPP Manager • MCAS Miramar Installation Commander

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Target	Responsibility
Ensure all acquisition personnel and contracting officer's representatives (CORs) for construction and service contracts have received GPP training.	<ul style="list-style-type: none"> • GPP Manager • Agency Program Coordinator/GCPC Program Manager
Coordinate with transportation office to validate their ongoing alternative fuel vehicle (AFV) program activities and identify any barriers to 100% compliance with Federal AFV acquisition goals.	<ul style="list-style-type: none"> • GPP Manager • SWRFT
Publish the GPP elements and examples of GP items under the appropriate element on the MCAS Miramar website.	<ul style="list-style-type: none"> • EMS Manager • GPP Manager
Post the form and supporting process explanation for EPA-designated item (recycled product) waivers to the MCAS Miramar website for downloading.	<ul style="list-style-type: none"> • EMS Manager • GPP Manager
Within 90 days of USDA publication of the biobased item lists, post the form and supporting process explanation for biobased product waivers to the MCAS Miramar website for downloading.	<ul style="list-style-type: none"> • EMS Manager • GPP Manager
Define and publish MCAS Miramar procedures for ensuring GCPC purchases comply with all GPP requirements.	<ul style="list-style-type: none"> • Agency Program Coordinator/GCPC Program Manager • GPP Manager
Define and publish MCAS Miramar procedures for ensuring construction and service contracts include EPA-designated items, USDA biobased, energy and water efficient, non-ODS products.	<ul style="list-style-type: none"> • S-4 Installations and Logistics • GPP Manager
Develop and publish a strategy for maximizing the use of EPPs and products that reduce the use of the EPA Priority Chemicals.	<ul style="list-style-type: none"> • GPP Manager • HAZMIN Center • Waste Management Division Manager

3.5 Training, Awareness, and Competence

Training is the key to executing a successful GPP. Contracting and purchasing personnel, project managers, and product users need training to ensure they know how to request and purchase goods and services that reduce environmental impacts and meet performance standards. DoD GPP metrics track the number of contracting personnel receiving training, but it is no less important for product users and persons who specify products be trained. The initial round of training gets everyone up to speed, while follow-on training is also needed to educate new employees and to refresh the skills of current personnel. MCAS Miramar’s GPP has developed its own training strategy in accordance with DON policy and local practices. The MCAS Miramar-specific GPP Training is located on the GPP website at www.miramar.usmc.mil/ems/environmental_programs/WasteMgmtDiv/GPP/default.htm.

Table 3-2. Required GPP Training

Personnel	Required Training
Contract and Purchasing Personnel	Formal GPP Training
Project Managers	Formal GPP Training
Product Users	GPP Awareness Training
GCPC Cardholders	GPP Awareness Training

3.5.1 Training for Contracting and Purchasing Personnel

Formal GPP training is required for contracting and purchasing personnel and is part of the DoD GPP Strategy.

Buying Green: A Multiple Functional Approach to Pollution Prevention. The workshop provides an overview of Federal pollution prevention initiatives and how they relate to the acquisition process. This course teaches contracting and purchasing officials to include environmental considerations in the planning, solicitation, evaluation, and award of Government contracts. Highlights of the class include a review of pollution prevention laws and Executive Orders, Federal Acquisition Regulation (FAR) requirements, life-cycle costing, and discussions on EPP. Call (614) 692-6166 or go online at www.hr.dla.mil/training/coursedeliv/courses/byalph.html.

3.5.2 Training for GCPC Holders

DAU training for GCPC cardholders may be accessed by the online Defense Acquisition University (DAU) course website at www.dau.mil under DAU Continuous Learning. The cardholder basic course is CLG001, and the refresher is CLG004. DAU training for all other personnel is CLC0046. Check the DAU website for periodic updates to stay current on your training requirements.

3.5.3 General Awareness Training

MCAS Miramar-specific GPP Awareness Training will be maintained on the MCAS Miramar GPP Website located at www.miramar.usmc.mil/ems/environmental_programs/WasteMgmtDiv/GPP/default.htm. GPP Awareness will be included as add-ons in other established trainings, including but not limited to: GCPC training and EMS Awareness Training.

The Gov Online Learning Center (GoLearn) offers a GPP awareness course called “What Is ‘Green’ Purchasing, Anyway?” Registration instructions are in Appendix H. The course is designed for contracting personnel, GCPC cardholders, PMs, and fleet managers. Course duration ranges from 1 ½ hours for GCPC cardholders to approximately 2 ½ hours for contracting officers and contracting officer representatives. Completion of the course satisfies the EO 13423 requirement that agencies provide training to contracting and program personnel. For technical questions or comments about the course or course navigation, please send an email to golearn@golearning.com. There is a minimal cost for this course.

Awareness training is provided to everyone who purchases or specifies items for purchase. On-line courses may be used, and MCAS Miramar’s GPP team may provide less formal training by using previously developed briefings. Here are some additional sources for awareness training:

- OFEE offers slides for green procurement overview training to agency contracting, environmental, and facilities staff. The training primarily addresses purchasing of recovered materials, USDA biobased, and EPP and also touches on purchasing of energy efficient products. (ofee.gov/gp/training.asp)
- Fact sheets and briefing slides are available on the Joint Service Pollution Prevention and Sustainability Technical Library. Presentations may be found under each topic. (p2library.nfesc.navy.mil)
- The Energy Star® program offers on-line training sessions on such topics as Energy Star® Purchasing and Procurement; Energy Star® - An Overview; New Building Design; Benchmarking Tool/Portfolio Manager; Money for Each Energy Upgrades; The Five-Stage Approach to Building Upgrades; and Monitor Power Management. To see the schedule or to register for a session, visit the Energy Star® Online Training and Presentations website. (www.energystar.gov/index.cfm?c=business.bus_internet_presentations)

3.5.4 Sources of General GP Information

Web links to important resources are provided throughout this Plan. You may also visit these websites for general information:

- Contracting resources are in the FAR 23 (www.acquisition.gov/comp/far/index.html), Environment, Energy and Water Efficiency, Renewal Energy Technologies, Occupational Safety, and Drug-Free Workplace.

- Technical resources for environmental and engineering personnel are posted on the Joint Service Pollution Prevention and Sustainability Technical Library at www.p2library.nfesc.navy.mil.

3.6 Internal and External Communications

Communication is needed to launch the program, kick off the training effort, and keep awareness high as the program matures. Once the first round of training is completed, MCAS Miramar's GPP must keep communication flowing to internal and external customers. Internal customers are the personnel who use, specify, or purchase products and services covered by the GPP. External customers are the contractors and vendors who provide these products and services. MCAS Miramar's communication strategies will help to fulfill the RCRA and FSRIA requirements to create a Promotion Program for GP. MCAS Miramar GPP promotional materials will be located on the GPP Program page, at www.miramar.usmc.mil/ems/environmental_programs/WasteMgmtDiv/GPP/default.htm. Some recommended strategies for raising awareness of the GPP to internal customers are provided below:

3.6.1 Internal Communication Strategies

- Provide general program information through downloadable brochures or fact sheets.
- Distribute MCAS Miramar GPP policies to all organizations along with the general program information.
- Use Earth Day activities or similar events as a forum for handing out educational materials.
- Use informal "refresher training" to maintain the skills of personnel involved with the GPP.
- Publish articles through the Public Affairs office in the MCAS Miramar paper and organizational newsletters.
- Update local operating instructions to include GPP requirements.
- Publish a list of local vendors of products that comply with GPP requirements.
- Seek volunteer organizations for limited trials of new products, get feedback on the cost and performance of the products, and publicize the results MCAS Miramar-wide.
- Consider using a facility construction or renovation project as a showcase for EPA-designated items, biobased, and energy efficient and water conservation products.
- Provide periodic updates through the e-mail system.
- Recognize outstanding efforts of MCAS Miramar personnel toward GPP success.

3.6.2 External Communication Strategies

- Prepare a Fact Sheet about MCAS Miramar's GPP and distribute it through the contracting office.
- Participate in regional vendor shows and trade fairs, or host a GPP Product Fair and invite local vendors to display their products.
- Discuss the MCAS Miramar GPP at bidder's conferences and pre-performance meetings for construction and service contracts.

3.7 Document Control

EMS document control procedures apply to all GPP documentation, including the MCAS Miramar policy and execution plan; construction plans and specifications; statements of work or performance work statements (PWSs); commodity purchase orders; written determinations justifying use of non-EPA-designated items; sample GPP forms and directions for use; completed project-specific GPP forms; lists of green products recommended for purchase; training records; and documentation of GPP audits and management reviews.

This Plan summarizes MCAS Miramar's procedures and responsibilities for creating and modifying purchasing documents and GPP process guidance, and for making them accessible to MCAS Miramar personnel. Consider placing general EMS documentation onto the facility intranet to ensure that the most current information may be efficiently located, reviewed, and revised, as needed. Project-specific documentation may be maintained in the contracting officer's or project manager's files.

Appendix E provides examples of procedures and forms to execute GPP requirements. The MCAS Miramar GPT may use and/or adapt them for local use as appropriate. Once forms and procedures have been selected, begin training or other promotional activities to ensure that all purchasers and other responsible personnel know where to find the information and how to use it.

Program documentation, such as policy, plans, procedures and forms should be reviewed annually as part of the GPP management review (see Section 5). Any changes that are identified to improve a program's effectiveness should be made as needed. New or updated documents should be entered into the MCAS Miramar EMS Website (www.miramar.usmc.mil/ems/index.html).

3.8 Operational Controls

Operational controls are procedures and specifications to ensure MCAS Miramar purchases mission-appropriate green products and services. The objective is to include environmental impacts along with price, performance, and availability in the criteria on which purchasing decisions are made. The plans that are posted in the "Sample Plans" on the Joint Service Pollution Prevention and Sustainability Technical Library at p2library.nfesc.navy.mil include examples of some of the implementation practices now in use at DON activities and installations.

Forms may also be developed and used to support and standardize GPP processes. There are no standard forms required by DoD or DON guidance. Sample forms are included in Appendix E, along with a series of typical actions that may be used to ensure GPP is successfully included in product, service, and facility acquisitions. These forms may be tailored as necessary.

3.8.1 Types of Documentation

Green Procurement Requirements Reference Sheet includes web page links for GPP-compliant product lists, third-party EPP standards, and selected sources of supply. The reverse

side of the form also lists the EPA-designated items. It may be used in conjunction with the other forms to identify the full range of GPP requirements that apply to a procurement action.

Recovered Material Determination Form (RMDF) is for procurement actions that include EPA-designated items. It documents the CPG items that are required, states whether or not they meet EPA requirements, and provides the rationale for exemptions. Note that although EPA-designated items and USDA biobased items are both subject to the same exemption criteria, a written determination to justify an exemption request is only required for the EPA-designated items.

GCPC Purchase Card Log is intended to be used to document GCPC cardholders' purchases of items that are designated for green procurement under one of the mandatory Federal programs. The log identifies whether or not purchased products met GPP requirements and documents the reason for choosing a non-compliant product. Congressional interest in tracking micro-purchases is increasing. MCAS Miramar may find it useful to track these purchases.

MCAS Miramar GPP Management Assessment Form may be used to evaluate the progress of the GPP (Appendix G).

3.9 Resolving Conflicts Between Purchasing Programs

The challenge in buying a product or selecting a service is to achieve a balance between various factors including cost, availability, performance, resource conservation, environmental benefits and the personal level-of-effort expended to find a product that best addresses all of these factors. Occasionally, conflicts may arise between the EPA-designated item and the USDA biobased requirements of the GPP, or between the GPP and other mandatory purchasing programs.

Purchasers are to evaluate product characteristics, price, and performance, and select the product that is best suited to the requirement. If MCAS Miramar buys a product that is included on both the EPA-designated items list and the USDA biobased items list, there is a choice to be made. Buyers are not legally required to choose EPA-designated items first, but if they do not they must document why they didn't buy an EPA-designated item.

4.0 Monitoring, Correction, Recordkeeping, and Reporting

The next step to ensuring a successful GPP is to monitor, correct, and record results. These three actions are important to evaluating how well the program requirements have been executed. One effective method to monitoring is through an audit. The audit process is a look at how well the GPP is working at the local level. It measures progress toward MCAS Miramar's GPP targets established in the Planning phase.

4.1 Monitoring and Measurement

Metrics and reporting are an important part of the Checking phase but are not the whole story. Metrics are used by higher headquarters as indicators of overall progress. Metrics alone will not provide all of the detail needed to ensure the MCAS Miramar GPP is performing as it should. Annual monitoring by MCAS Miramar GPT will evaluate local program progress and discover ways to improve execution.

The Office of Federal Procurement Policy (OFPP) is required to report to Congress every two years on the actions taken by Federal agencies to implement the GPP. EO 13423 requires agencies to track and report to the Office of the Federal Environmental Executive (OFEE) their purchases of EPA-designated items and implementation of GPP programs.

The "RCRA 6002 Report," collected as part of DON's Solid Waste Pollution Prevention Annual Data Summary (SW EDMWEB) satisfies both of these needs. The report format was developed by an interagency working group led by OFPP and OFEE. Biobased product purchasing questions are included in the report. This part of the report will continue to develop as the program is formalized by USDA. Although the report to Congress is biennial, OFEE requires Federal agencies to submit data annually. The DoD metrics (see Section 4.1.2) have been designed with the RCRA Report in mind, to minimize data gathering and allow us to focus our energy on program execution instead.

4.1.1 EO 13423: Green Purchases

As part of the annual reporting for the EO 13423 Sustainable Practices data call, DoD Agencies are responsible for reporting information on green procurement topics. Therefore, Navy or USMC may contact MCAS Miramar for specific input related to the purchase of green products.

4.1.2 Using DoD Metrics to Monitor/Measure GPP Performance

There are five top-level metrics for the GPP program:

1. **Number of contracts that successfully acquire EPA-designated items.** Data is taken from the FPDS-NG and depends on careful data entry on the Contract Action Report. The “A” code on Line 19A means EPA-designated items were acquired and all contained the required minimum recovered material content. “E” code means no EPA-designated items were acquired. The “B”, “C”, and “D” codes are used to identify any exemptions that were invoked for this particular contract (for timeliness, price or performance respectively). The “A” code should be used whenever a contract, including service or construction contracts, requires the use of an EPA-designated item and the product that is provided meets EPA standards. Finally, DON tracks the Contract Action Report, which identifies whether or not the appropriate FAR clauses for recovered material-content (EPA-designated item) purchasing were included in the contract. For service contracts, green commodities are acquired and then coded appropriately.
2. **Purchase of “indicator items.”** Indicator items were chosen by a Federal interagency working group from the EPA-designated item list, so that data would not need to be collected for each and every one of the EPA-designated items. Data will be obtained from DLA’s Environmental Reporting Logistics System (ERLS) and not from local purchase records. The indicator items are:
 - Sanitary tissue products;
 - Toner cartridges;
 - Construction products;
 - Landscaping timbers;
 - Park benches/picnic tables;
 - Traffic barricades;
 - Engine lubricating oil; and
 - Signage.

Recovered material content for EPA-designated item information is provided by contractors whenever FAR Clause 52.223-9 is used in contracts over \$100,000. No requirement exists for MCAS Miramar to roll up this information and report it to anyone, but it should be used internally to see how well your contractors are following EO 13423 requirements.

3. **Number of contracting personnel trained in GP.** This applies to training for personnel in career fields 1102 and 1105. See Section 3.5.1 for more detail on training requirements. Depending on the training source, records may be kept by the training provider or locally at MCAS Miramar. To make sure the data is reported accurately, it is critical for everyone who takes the training to fill out their registration correctly. Please see Appendix H for instructions.
4. **Number of organizations or installations participating in the Federal Electronics Challenge (FEC) program.** The FEC is a partnership program that assists organizations or installations with becoming better electronic stewards.

There are three main goals of the FEC:

- Purchase greener electronic products.
- Reduce impacts of electronic products during use.
- Manage obsolete electronics in an environmentally safe way.

5. **Number of contract audit findings.** This metric is tracked in order to ensure that there is a decrease in audit findings as an indication of organization or installation compliance with GPP requirements. DON began collecting fiscal year data for all five of the DoD metrics beginning in 2004 and review metric data annually to ensure upward trends are achieved. Even though the data for the metrics are gathered and reported by DON MCAS Miramar's GPT can also use the data from the FPDS-NG and the DLA ERLS system each year to track their progress in meeting the DoD metrics and take action to improve performance.

4.1.3 Monitoring MCAS Miramar Targets

In addition, as part of the routine EMS procedures, the GPT should review the status of the established targets to monitor the progress of GPP implementation. The GPT should document this review and status, along with any issues or lessons learned associated with the implementation of these targets. The review should also assess any impediments or conflicts that currently (or in the future) affect the implementation of the GPP.

4.1.4 Other Measuring/Monitoring of GPP Performance

The MCAS Miramar GPT may also create local indicators to further measure and improve GPP performance. Consider (1) tracking state and local requirements; (2) tracking the number of GCPC cardholders and/or project managers that have been trained; (3) the percentages of active service or construction contracts that address GPP requirements; (4) increases in the types of GPP products MCAS Miramar acquires; (5) reductions in waste generation or resource use that may be attributed to the GPP; or (6) any other information that would be easy to collect and is useful for driving the local program forward. The program may become more meaningful to MCAS Miramar personnel if its GPP actions may be translated into actual, tangible benefits.

4.2 Corrective and Preventive Action

Performance information comes from many sources such as metrics, audits, inspections, and contract performance data. All of this collected information may be used in two ways: to review current program performance, and to make program improvements.

4.2.1 Internal Audits and Contract Performance Information

Environmental Quality Assessment/Environmental Compliance Evaluation (EQA/ECE) audits measure MCAS Miramar's compliance with environmental laws, regulations and policy. The audit team checks to see that:

- MCAS Miramar has a GPT that consists of representatives designated by the MCAS Miramar commander to execute the program.
- The GPP Plan has been developed, implemented, and maintained.

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- Public Works/Facility Maintenance Office provides education and training, in conjunction with Contracting.
- GPP is included in all Public Works/Facility Maintenance Officer specifications for construction and service contracts that call for the purchase of GPP elements.
- Contract performance information comes from inspection checklists, and from contractor-provided estimates and certifications for GPP purchases.

It is the responsibility of the MCAS Miramar Environmental Management Division to correct and/or address any findings of non-compliance during an EQA/ECE.

4.2.2 Regulatory Inspections and DON Compliance Guidance

EPA may conduct compliance audits for GPP elements purchasing in accordance with RCRA and EO 13423. EPA's "Guidance on Conducting Inspections of Federal Facilities for Compliance with Section 6002 of the Resource Conservation and Recovery Act" (May 12, 1999) was written to show authorized states how to evaluate GPP elements purchasing compliance as part of their RCRA inspections. (Please note that this applies to RCRA compliance, and at present, there is no similar guidance for determining compliance with the Farm Bill.)

According to the Compliance Guidance, EPA has elected to focus initially on field level awareness of the RCRA 6002 requirements. Affirmative procurement (AP) compliance may be reviewed by EPA or authorized State inspectors as part of RCRA, The Federal Facility Compliance Act (FFCA), or "multi-media" inspections. Two actions for inspectors are included in the EPA guidance:

- Distribution of a questionnaire to the MCAS Miramar commanding officer, and
- Inspection of the facility motor vehicle maintenance activities (where they exist).

Motor vehicle maintenance activities were selected due to their common presence at a broad range of Federal facilities; significant awareness and availability of products and services that meet the EPA Guidelines for vehicular products; and likelihood that RCRA inspections would normally be conducted at these locations. The motor vehicle maintenance audit protocol and the questionnaire are included in the EPA guidance document.

While all DON activities/installations must comply with the purchase of EPA-designated items, DON personnel should also understand that any enforcement of RCRA 6002 requirements by regulators is beyond the scope of their authority. A Notice of Violation (NOV) may be issued for EPA-designated item procurement violations, but inclusion of RCRA 6002 requirements in a subsequent Administrative Order would be an overreach of the regulator's enforcement authority. If MCAS Miramar receives an NOV that includes alleged affirmative procurement violations, they should refer to OPNAVIST 5090.1 (latest version) or to MCO P5090.2 (latest version) for guidance on receiving notices of non-compliance.

4.3 Recordkeeping for Tracking Performance of GPP

Documentation needs to be kept to record the progress of the GPP, and also to support MCAS Miramar's EMS. A fully functioning GPP will have a variety of records that need to be kept to allow for the tracking of progress. Section 4.3.1 identifies the minimum documents that need to be maintained by MCAS Miramar. All applicable MCAS Miramar GPP documents and records

will be maintained on the MCAS Miramar EMS website, located at www.miramar.usmc.mil/ems/environmental_programs/WasteMgmtDiv/GPP/default.htm.

4.3.1 *Types of GP Records*

As a minimum, keep the following records and forms, and know where they are filed in case an auditor or inspector asks to see them:

- **Training Records.** Training records for acquisition personnel and GCPC cardholders must be kept to verify progress toward the DoD metrics, in accordance with the Structure and Responsibilities section of the installation EMS, a point of contact (POC) should be identified as being responsible for maintaining training records. You should also consider keeping training records for project managers and other Public Works/Facility Maintenance personnel, and documenting any awareness training provided to general MCAS Miramar personnel. Depending on the training source, records may be kept by the training provider or may be local records (such as GCPC training).
- **Forms for construction projects and service contracts.** This applies to GPP Statements or Recovered Material Determination Forms (RMDFs) for individual construction projects and service contracts (see Appendix E). These forms document how a procurement action has been reviewed for GPP applicability. If the RMDF is not used, be sure to keep and file all written determinations for exemptions from GPP element requirements.
- **GCPC cardholder logs.** GCPC cardholder logs (see Appendix E).
- **FPDS-NG (Contracting Action Report).** This report documents GPP elements (as coding is available) of compliance in contracting actions.
- **Contractor provided estimates and certifications.** Contractor-provided estimates and certifications of EPA-designated item not only document the specific products that were used in a contract, but also satisfy a programmatic requirement in RCRA for “Vendor Estimates, Certification and Verification.”
- **MCAS Miramar-specific documentation.** MCAS Miramar’s GPP policy, plans, operational procedures, and audit results/reports.

4.3.2 *Record Archival*

A GPP Program page is maintained under the Waste Management Division located at www.miramar.usmc.mil/ems/environmental_programs/WasteMgmtDiv/GPP/default.htm. As mentioned before, all pertinent MCAS Miramar GPP records will be maintained electronically on this website, or they will be located at another MCAS Miramar website (i.e. MCAS Miramar Contracting website) and linked to the MCAS Miramar EMS website.

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The MCAS Miramar EMS Manager is responsible for maintaining this website and can provide guidance regarding the appropriate file type, size, and location. It is recommended that all pertinent GPP documents and records be maintained for at least five years.

5.0 Management Review

Management review is different from Checking and Corrective Action, as the management review takes a step back and looks at the program itself, to see if improvements are needed to make it more effective.

The management review looks at ways to improve the program structure, not just its execution. Performance may suffer for two reasons: first, the program is sound but the execution is sloppy; or second, there is a problem with the process itself. If the checking (audit) process determines that GPP execution is not working well because of a deeper flaw in the program set-up, this is dealt with during the management review phase

5.1 Use GPP Monitoring Data to Drive Program Improvement

The RCRA and FSRIA program requirements for annual monitoring and review are satisfied by the actions in Sections 4 and 5 of this Plan. MCAS Miramar reviews and evaluates the effectiveness of its GPP every year. This action is separate and distinct from the requirement to collect and report agency-wide data about GPP implementation to Congress and the routine review of targets.

As part of a continual improvement process, the GPP requires MCAS Miramar's top management to review the GPP, at least annually, to ensure that the GPP is working. These GPP management reviews may be a part of MCAS Miramar's annual EMS review, or may be done separately. Management review serves several functions:

- Providing general information about the GPP to top management;
- Discussing the relevancy of the MCAS Miramar's GP policy, objectives, and targets in light of changing situations, and making appropriate revisions;
- Discussing GPP audit results, and approving related plans and resources required to improve the GPP; and
- Reviewing progress toward objectives and targets and approving new or revised objectives and targets.

The management review should be comprehensive, although not all elements of the GPP need to be reviewed at once. The review of the policy, objectives, and procedures should be carried out by the level of management that defined them. Reviews should include:

- Minutes from previous management reviews;
- Results from audits;
- The extent to which objectives and targets have been met; and
- The continuing suitability of the GPP in relation to changing conditions and information, concerns among relevant interested parties (internal suggestions and external communications).

The management review should evaluate the need to change the GP policy, objectives, targets, and other elements due to the following factors:

- Changing mission;
- Addition of new activities or tenants;

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- Changing regulations, DoD policy, or requirements;
- Changes in the products or activities of MCAS Miramar;
- Lessons learned from internal or external source; and
- Reporting and communication.

Management reviews should assess both positive and negative findings and not only focus on the negative. The purpose of the management review should be continual improvement of the GPP. The continual improvement process should:

- Identify areas of opportunity for improvement of the GPP;
- Determine the cause or causes of negative audit findings or deficiencies;
- Develop and implement plans of corrective and preventive action to address root causes;
- Verify the effectiveness of the corrective and preventive actions;
- Document changes in procedures resulting from process improvement; and
- Make comparisons with objectives and targets.

The minutes of the management review should be recorded and the resulting observations, conclusions, and recommendations should be documented to prepare for necessary actions. In addition, if any corrective action must be taken, top management should follow up to ensure that the action was effectively implemented.

All management review documentation should be done in accordance with the MCAS Miramar's document control procedures. Many sources of information are available to help MCAS Miramar conduct its management review:

- The information that is routinely collected during GPP execution may help to identify parts of the program that may need to be changed. For example, if the written determinations for the appropriate GPP elements purchasing exemptions are reviewed as a group, this may show a tendency for a certain type of exemption to be claimed again and again. That may indicate a root cause such as lack of awareness of sources of alternative products. This, in turn, could indicate a need for a new MCAS Miramar-wide information campaign or for enhancing the training plan.
- DoD's GPP Strategy contains the GPP Facility Questionnaire which may be used to assess the GPP. It includes questions for Policy, Planning, Implementation and Operation, Reporting and Corrective Action, and Management Review.
- Finally, update MCAS Miramar's GP policy and GPP Plan as required to respond to changes in the mission or in the GPP program requirements.

5.1.1 Information Sources for Management Review

The following is a list of information resources to assist in the GPP management review:

- Results from Audits
- Progress on objectives and targets
- FPDS-NG I Contract Action Report
- DLA-provided GP data
- Training data

5.2 Reward Excellence

Consider including GPP performance awards in MCAS Miramar's local awards program. Recognize organizations and individuals who make outstanding contributions to GPP execution. Awards and plaques are an EPA-designated item and should be purchased with recovered materials.

There are also several Federal, EPC, ESOHC EPC, ESOHC DoD and DON awards that consider GPP performance, including:

- Federal Energy Management Program Awards for Energy Efficiency and Water Conservation
 - Energy Saver Showcase Awards,
 - Federal Energy and Waste Management Awards,
 - Louis R. Harris, Jr. Awards, and
 - Presidential Award for Leadership in Federal Energy Management - Contributions are in the areas of energy efficiency, water conservation, and the use of advanced and renewable energy technologies.
- Closing the Circle (CTC) Awards: Beginning in 2005, CTC awards were made for the following categories: Waste/Pollution Prevention, Recycling, Green Procurement, Environmental Management Systems, Sustainable Design/Green Buildings, and Minimizing Petroleum Usage in Transportation
- Secretary of Defense Environmental Awards for the following categories: natural resources conservation, cultural resources management, environmental quality, pollution prevention, environmental restoration, environmental excellence in weapon system acquisition.
- Secretary of the Navy Environmental Awards, sponsored by the CNO Environmental Readiness Division, recognizes Navy people, ships and installations for their exceptional environment stewardship.

See Appendix F for MCAS Miramar GPP success stories and awards received.

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Appendix A

MCAS Miramar GPP Policy

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MCAS Miramar Green Procurement Program Policy

Miramar Marine Corps Air Station recognizes that our activities impact upon the environment through our routine internal operations and development, and through our influence and effects upon the wider community. We embrace the principles of sustainable development; are committed to continual environmental improvement and pollution prevention; strive to comply with environmental laws; and seek to promote sound environmental practice. We will promote GPP practices at every level and in every squadron, tenant and contractor sector on our base.

In August 2004, DoD issued a new GPP policy that broadened the focus of its green purchasing program. The policy defines "Green Procurement" as "the purchase of environmentally preferable products and services in accordance with Federally-mandated 'green' procurement preference programs". Affirmative procurement was the first of these mandatory programs and it required Federal agencies to acquire products made with recycled or recovered materials. These requirements are still in effect, but have been joined by new GPP program components. These new components are as follows: Energy and Water Efficient Products; Alternative Fueled Vehicles, Alternative Fuels and Fuel Efficient Vehicles; Non-Ozone Depleting Substances and EPA Priority Chemicals.

In February 2009, DON issued "Green Procurement Program Implementation Guide" to provide guidance regarding execution of the updated DoD GPP Strategy and the DON GPP Policy. Use of this guide will strengthen MCAS Miramar's ability to meet Executive Order 13423 and DON policy requirements, protect valuable resources, and sustain the mission.

ENVIRONMENTAL TARGETS AND OBJECTIVES

- Achieve 100 percent compliance with mandatory Federal GPP program components in all acquisitions
- Monitor and track progress toward DoD GPP goals
- Continually review and improve of our GPP policy and management systems
- Promote awareness of our GPP policy to all our employees, residents and the surrounding community

SPECIFIC TARGETS BY 2010

- Establish a MCAS Miramar GPT
- Train Contracting, Engineering, and GPC cardholders on their GPP responsibilities
- Establish GPP forms, procedures and communications strategies

Our documented Environmental Management System (EMS) provides a framework for establishing and reviewing GPP objectives as well as monitoring our performance. Assessments and periodic reviews will be used as tools to establish metrics that monitor our GPP progress and make any necessary program corrections.

We pledge to comply with all relevant GPP legislation and regulation, where possible we will view these as the minimum standards and shall seek to exceed them.

If you or your staff have any questions, please contact our POC, _____, [unit], DSN xxx-xxxx, email: _____.

[signed]

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Appendix B

GPP Product Requirements, Exemptions, and Procurement Resources

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Green purchasing requirements affect all procurement of products and services made by MCAS Miramar personnel and their contractors – no matter how they are purchased, or what the dollar value of the purchase is. Procuring agencies include any Federal agency, State or local agencies using appropriated Federal funds for a procurement, or any contractors (C&D, Janitorial, etc.) with these agencies (with respect to work performed under the contract). All personnel who purchase items, write contract specifications, or write performance work statements for service contracts are instrumental in making the GPP work and must understand what the GPP requirements are and comply with them.

Section 6002 of RCRA establishes the Federal program that directs Federal purchasing decisions for recycled content products. RCRA section 6002(e) requires EPA to: (1) designate items that are or can be made with recovered materials, and (2) prepare guidelines to assist procuring agencies in complying with affirmative (green) procurement requirements set forth in subsections (c), (d), and (i) of section 6002 and also requires that any procuring agency using appropriated Federal funds must purchase those items composed of the highest percentage of recovered materials practicable. The requirements of RCRA section 6002 apply to such procuring agencies only when procuring designated items where the price of the item exceeds \$10,000, or the quantity of the item purchased in the previous year exceeded \$10,000. The \$10,000 threshold applies to all purchases made by an entire agency rather than regional or local offices (e.g., Department of the Interior, DoD, etc). Most Federal agencies exceed the \$10,000 threshold for EPA designated items. Violations of RCRA section 6002 by Federal agencies do not give rise to administrative penalty actions or orders under RCRA's enforcement authorities. This conclusion does not, however, limit EPA's authority to issue notices of violation (NOV)

The Federal GPP components were created as individual programs authorized by various statutes and EOs and administered by three agencies: EPA, DoE, and USDA. Under EO 13423, the Federal agency shall give procurement preference to the following components, as stated in the DoD GPP Strategy dated November 2008:

- Recycled content products designated in EPA's Comprehensive Procurement Guidelines.
- Energy Star® products identified by DoE and EPA, as well as FEMP designated energy-efficient products.
- Water-efficient products, including those meeting EPA's WaterSense standards.
- Energy from renewable sources.
- Biobased products designated by the USDA in the BioPreferred program.
- Environmentally preferable products and services, including EPEAT-registered electronic products.
- AFVs and alternative fuels required by EPCa.
- Products with low or no toxic or hazardous constituents.
- Non-ozone depleting substances, as identified in EPA's SNAP.

The Federal Green Construction Guide for Specifiers was developed by the EPA, the Federal Environmental Executive, and the Whole Building Design Guide (WBDG) to help Federal building PM's meet mandates established by statute and EOs, as well as EPA and DoE program recommendations. The specifications reference several North American forest

certification standards and other information pertinent to green construction. The guide can be found at the following website: www.wbdg.org/design/greenspec.php . In addition, the U.S. Green Building Council (USGBC) developed Leadership in Energy and Environmental Design (LEED), a Green Building Rating System that provides standards for environmentally sustainable construction. Information on LEED can be found at www.usgbc.org. The Green Purchasing section of the Office of the OFEEs website, www.ofee.gov/gp/gp.asp, is the portal to the Federal GPPs and links to each of the program components. The EPA Database of Environmental Information for Products and Services at yosemite1.epa.gov/oppt/eppstand2.nsf provides a quick reference guide to the various programs and products involved in DoD's GPP. Each element is described in more detail in the following sections.

EPA-Designated Items

Recovered materials are waste materials and by-products which have been collected for recycling and reprocessed to create a new material or product. Buying products with recycled-content closes the recycling loop by putting recyclable waste back to good use as marketable products. The GPP recovered materials program, also referred to as the EPA CPG program, is part of EPA's continuing effort to promote the use of materials recovered from solid waste. The EPA is required to designate products that are or can be made with recovered materials, and to recommend practices for buying these products.

Once a product is designated, [procuring agencies](#) are required to start purchasing it, with the highest recovered material content level practicable, within one year from its designation date. The CPG is a list of products that can be made with recovered materials, are technologically and economically feasible to produce, and will conserve raw materials and reduce the solid waste stream. The CPG list is the result of scientific analysis followed by a formal EPA rulemaking process. This is a recurring activity. The EPA also issues guidance for buying recovered material products in their "Recovered Materials Advisory Notices" (RMANs). The RMANs recommend recovered material content ranges for CPG products based on current information about commercially available products. RMAN levels are updated by EPA as marketplace conditions change. Although EPA considers the recovered material content percentages listed in the RMAN to be recommendations, the AF has adopted these percentages as requirements.

The EPA has also created the "Recycled Content (ReCon) Tool" to help companies and individuals estimate life-cycle greenhouse gas (GHG) emissions and energy impacts from purchasing and/or manufacturing materials with varying degrees of post-consumer recycled content. Emission estimates provided by the ReCon Tool are intended to support voluntary GHG measurement and reporting initiatives, as well as such initiatives as EPA's CPG Program. ReCon is available both as a web-based calculator and as a Microsoft Excel spreadsheet that can be accessed from the EPA website at yosemite.epa.gov/oar/globalwarming.nsf/content/ActionsWasteToolsRecon.html.

The requirement to purchase products made with recovered (recycled) materials stems from RCRA and EO 13423. The requirements apply to all MCAS Miramar personnel that:

- Prepare specifications for products,
- Procure or request procurement of products (consumers), and

- Provide support to base organization (such as base supply or contracting).

These requirements apply to all purchases, whether for construction or service contracts or as a credit card (GPC) purchase, and can be acquired through Federal supply sources such as GSA or DLA. All MCAS Miramar organizations or personnel are encouraged to do their part in “Greening the Government” whether mandated to do so or not. When EPA CPG designated items are procured from vendors, the procurement originator can use the “Recovered Materials Determination Form” and the “Recovered Materials Exemption Form”. The completed form becomes part of MCAS Miramar’s Contracting Office contract file.

Table B-1. EPA’s CPG-designated Products

Construction Products		
Designated:	Proposed:	In Use at Miramar:
Building Insulation Products	Nylon carpet and nylon carpet backing	
Carpet (Polyester)		
Carpet Cushion		
Cement and Concrete Containing:		
-Coal fly ash		
-Ground granulated blast furnace slag		
-Cenospheres		
-Silica fume		
Consolidated and Reprocessed Latex Paint		
Floor Tiles		
Flowable Fill		
Laminated Paperboard		
Modular Threshold Ramps		
Non-pressure Pipe		
Patio Blocks		
Railroad Grade Crossing Surfaces		
Roofing Materials		
Shower and Restroom Dividers and Partitions		
Structural Fiberboard		

Landscape Products

Designated:	Proposed:	In Use at Miramar:
Compost Made From Recovered Organic Materials	None at this time	
Fertilizer Made From Recovered Organic Materials		
Garden and Soaker Hoses		
Hydraulic Mulch		
Lawn and Garden Edging		
Plastic Lumber Landscaping Timbers and Posts		

Non-paper Office Products

Designated:	Proposed:	In Use at Miramar:
Binders, clipboards, file folders, clip portfolios, and presentation folders	None at this time	
Office Furniture		
Office Recycling Containers		
Office Waste Receptacles		
Plastic Desktop Accessories		
Plastic Envelopes		
Plastic Trash Bags		
Printer Ribbons		
Toner Cartridges		✓

Paper and Paper Products

Designated:	Proposed:	In Use at Miramar:
Commercial/industrial sanitary tissue products	None at this time	
Miscellaneous papers		
Newsprint		
Paperboard and packaging products		
Printing and writing papers		✓

Park and Recreation Products

Designated:	Proposed:	In Use at Miramar:
Park Benches and Picnic Tables	None at this time	
Plastic Fencing		
Playground Equipment		
Playground Surfaces		
Running Tracks		

Transportation Products

Designated:	Proposed:	In Use at Miramar:
Channelizers	None at this time	
Delineators		
Flexible Delineators		
Parking Stops		
Traffic Barricades		
Traffic Cones		

Vehicular Products

Designated:	Proposed:	In Use at Miramar:
Engine Coolants	None at this time	✓
Rebuilt Vehicular Parts		✓
Re-refined Lubricating Oils		✓
Retread Tires		✓

Miscellaneous Products

Designated:	Proposed:	In Use at Miramar:
Awards and Plaques	None at this time	
Bike Racks		
Blasting Grit		
Industrial Drums		
Manual-grade Strapping		
Mats		
Pallets		
Signage		
Sorbents		

Exemptions

Exemptions on recovered material regulations may be granted on a case-by-case basis if a price, performance, or timeliness issue exists. FAR 23.404 requires 100 percent of purchases of EPA-designated products to contain recovered material, unless the item cannot be acquired competitively within a reasonable time frame; meeting appropriate performance standards; or at a reasonable price. In FAR 23.405 the contracting officer shall place a written justification in the contract file if procurement of an EPA-designated product containing recovered material does not meet or exceed the EPA recovered material content guidelines,

For DON purposes, a product is “unreasonably priced” if it costs more than a comparable non-recycled or biobased product. This is a judgment call for which no written policy exists. There is no prescribed format for the written justification. The Recovered Material Determination Form may be used unless a different form has been adopted by your MAJCOM or installation.

Where to Find Appropriate Products

These websites will assist MCAS Miramar personnel in finding EPA-designated products:

- **GSA Advantage!** Look for the CPG symbol and the recycling symbol. Look for the “Environmental” link for a product search.
(https://www.gsaadvantage.gov/advgsa/advantage/main/start_page.do)
- **DLA’s Defense Supply Center Richmond (DSCR)** offers an environmental products catalog, re-refined oil and other environmentally friendly products and information.
(www.dscr.dla.mil/environmental.htm)
- **DoD EMALL** is an Internet based Electronic Mall, which allows military customers and other authorized government customers to search for and order items from government and commercial sources. DoD EMALL is a DoD program operated by DLIS. The website identifies environmentally preferable items with a green tree logo. For green purchases access the EMALL through the “Buy Green” link. The website also provides information on green policies as well as a tutorial.
(https://emall6.prod.dodonline.net/main/welcome_to_DOD_EMALL.jsp)
- **The Javits-Wagner-O'Day (JWOD) Program** provides employment opportunities for Americans who are blind or have other severe disabilities through two nonprofit agencies, the NIB and the NISH, which serves people with a range of disabilities. Per FAR 8.002, these agencies are a mandatory source for all supplies and services which are on the procurement list. The JWOD program has a green program which can be found under the "Environmental Products" category that allow for purchase directly from the [JWOD AbilityOne Catalog](#). Throughout the catalog, products containing recycled content are indicated by the recycling symbol, and the JWOD logo indicates products that are environmentally friendly. In addition to the catalog, their products can be purchased from authorized commercial distributors, including GSA Advantage! and the DoD EMALL. (www.jwod.gov/jwod/p_and_s/p_and_s.htm)
- NISH is a source for janitorial services and is actively working to become a leader in green cleaning practices, including recycled-content product use. A report on their website explains this initiative.
- **UNICOR** is another mandatory source of supply. The mission is to employ and provide job skills training to the greatest practicable number of inmates confined within the Federal Bureau of Prisons; contribute to the safety and security of our Nation's correctional facilities by keeping inmates constructively occupied; produce market-priced quality goods and services; operate in a self-sustaining manner; and minimize Federal Prison Industries impact on private business and labor. UNICOR’s product categories include: Clothing & Textiles, Computer/Electronics Recycling, Electronics, Furniture, Industrial Products, Remanufacturing/Repairing - Fleet Management & Vehicular Component, and Services (Data, Printing & Laundry). Their website describes UNICOR’s green product initiatives and provides a search for products. Items marked with a small pair of trees icon are green/recycled.
(www.unicor.gov/about/environmental_sensitivity/)
- **DLA’s Document Automation & Production Service (DAPS)** or [DAPS Online](#) is a web-based electronic ordering system designed to provide customers with the tools to manage documents, production, and distribution needs. In addition to using compliant

paper for customer orders, DAPS can now supply 20 percent white bond paper that complies with CPG requirements at a competitive price. (www.daps.dla.mil/)

- **Central Contractor Registration (CCR)** is a database at www.ccr.gov that can be used to locate small businesses that provide green products. On the main web page, choose the link to “Dynamic Small Business Search,” then search for “Buy Green NAICS codes.” (dsbs.sba.gov/dsbs/search/dsp_dsbs.cfm)
- **LEED Green Building Rating System**, developed by the U.S. Green Building Council (USGBC), provides a suite of standards for environmentally sustainable construction. LEED was created to accomplish the following:
 - Define "green building" by establishing a common standard of measurement
 - Promote integrated, whole-building design practices
 - Recognize environmental leadership in the building industry
 - Stimulate green competition
 - Raise consumer awareness of green building benefits
 - Transform the building market
- Green Building Council members, representing every sector of the building industry, developed and continue to refine LEED. The rating system addresses six major areas:
 - Sustainable sites
 - Water efficiency
 - Energy and atmosphere
 - Materials and resources
 - Indoor environmental quality
 - Innovation and design process
- Commercial sources - As the green purchasing movement spreads beyond the Federal government, increasing numbers of regional governments and private organizations are sponsoring websites to help consumers locate products made with recycled/recovered materials, and other EPP products. Sites that provide information free of charge include:
 - American Chemistry Council's Recycled Plastic Products Directory (www.americanchemistry.com/s_plastics/sec_rppd.asp?CID=1592&DID=6054)
 - City and County of Honolulu, HI (www.opala.org/solid_waste/archive/Recycled_Products.html)
 - California Integrated Waste Management Board (www.ciwmb.ca.gov/RCP/)
 - New Jersey Department of Environmental Protection (www.nj.gov/dep/dshw/recycling/buy_recy/)
 - King County, WA Recycled Content Building Materials Product Guide (your.kingcounty.gov/solidwaste/greenbuilding/)
 - Minnesota Recycled Products Guide (www.pca.state.mn.us/oea/rpdir/index.cfm)
 - Solid Waste Agency of Lake County, IL (www.lakecountyil.gov/swalco/DisposalGuide/RecyclingProductsGuide.htm)
 - Ohio Department of Natural Resources (ohiodnr.com/tabid/18279/Default.aspx)
 - Texas Commission on Environmental Quality (www.tceq.state.tx.us/assistance/P2Recycle/TXrecy/resources.html)
 - OIKOS Green Building Source (www.oikos.com/)
 - Conservatree - Paper for the Environment (www.conservatree.com/)

- Weisenbach Recycled Products (www.plasticresources.com/)

Energy and Water Efficient Products (FEMP and Energy Star®)

Federal agencies must reduce energy use, purchase energy-efficient products, increase the use of renewable energy, and conserve water. FEMP and the Energy Star® program guide these efforts. Federal agencies are required to buy products that comply with Federal energy efficiency requirements, and to design and operate buildings to minimize energy and water consumption. Energy- and water-conserving product purchases are mandatory elements of the DON GPP.

In addition, DON installations are encouraged to support Federal alternative energy goals by purchasing green power where it is available and cost-effective, and by including renewable energy technologies in construction projects where appropriate. The main guiding documents governing energy and water reduction goals for Federal sites are detailed below. Energy conservation requirements affect all purchases of computers, monitors, printers, scanners, fax machines and copiers; building construction, renovation and maintenance projects; and purchases of appliances. Water conservation requirements apply to building construction and renovation projects.

Exemptions

EISA 2007 section 435 prohibits Federal agencies, effective December 19, 2010, from leasing buildings that have not earned an Energy Star® label. Exemptions are provided if:

- No space is available in a labeled building that meets the functional requirements of an agency, including location needs
- The agency proposes to remain in a building that it has occupied previously
- The agency proposes to lease a building (or space within a building) of historical, architectural, or cultural significance (as defined in section 3306(a)(4) of Title 40, United States Code)
- The lease is for no more than 10,000 gross square feet of space

Energy and water-efficient product purchases are mandatory elements of the MCAS Miramar GPP. In addition, Federal agencies are encouraged to purchase electricity and thermal energy from sources that use high-efficiency and low-carbon greenhouse gas intensity to the highest extent possible. DON installations are also encouraged to support Federal alternative energy goals by including renewable energy technologies in construction projects where appropriate. Visit the FEMP website (www1.eere.energy.gov/femp/pdfs/eep_productfactsheet.pdf) for any new updates on both energy and water-efficient products. The Energy Star® program provides additional guidance for some products not listed here (e.g., TVs, VCRs, home audio equipment). Buyers should consult the Energy Star® website for more information about such products as well (www.energystar.gov/index.cfm?fuseaction=find_a_product).

Table B-2. Energy and Water Efficient Products

Appliances

Energy Conservation Products:	In Use at Miramar:	Water Conservation Products:	In Use at Miramar:
Refrigerators	✓		
Freezers			
Dishwashers			
Clothes Washers			
Room Air Conditioners			
Dehumidifiers			
Room Air Cleaners			
Battery Chargers			

Commercial and Industrial Equipment

Energy Conservation Products:	In Use at Miramar:	Water Conservation Products:	In Use at Miramar:
Commercial Unitary Air Conditioners		New Homes	
Air-Cooled Chillers			
Water-Cooled Chillers			
Commercial Heat Pumps			
Ground-Source Heat Pumps	✓		
Boilers	✓		
Distribution Transformers (Medium)			
Electric Motors			
Centrifugal Pumping System			
Air-source Heat Pumps			
Light Commercial H&C			
Gas Condensing water heater			
Roof Products			
Geothermal Heat Pumps			
Commercial Dishwashers			
Commercial Fryers			
Commercial Hot Food Holding Cabinets			

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Energy Conservation Products:	In Use at Miramar:	Water Conservation Products:	In Use at Miramar:
Commercial Ice Machines			
Commercial Solid Door Refrigerators & Freezers			
Vending Machines			
Transformers			
Commercial Steam Cookers			

Residential Equipment

Energy Conservation Products:	In Use at Miramar:	Water Conservation Products:	In Use at Miramar:
Central Air Conditioners		Landscape Irrigation Services	✓
Air Source Heat Pumps		Weather- or Sensor-Based Irrigation Control Technologies	
Ground-Source Heat Pumps	✓		
Gas Furnaces			
Electric Water Heaters			
Gas Water Heaters			
Programmable Thermostats	✓		
Ventilation Fans			
Heat Pump Water Heater			
High-Efficiency Gas Storage Water Heater			
Whole-home Gas Tankless Water Heaters			
Solar Water Heater			
Windows, Doors, & Skylights			
Combination TV/DVD/VCR Units	✓		
Digital-to-Analog Converter Boxes			
DVD Products	✓		
External Power Adapters			
Home Audio			
Set-top Boxes			

Energy Conservation Products:	In Use at Miramar:	Water Conservation Products:	In Use at Miramar:
Televisions	✓		

Construction Products

Energy Conservation Products:	In Use at Miramar:	Water Conservation Products:	In Use at Miramar:
Residential Windows			
Roof Products			
Home Sealing (Insulation and Air Sealing)			

Food Service Equipment

Energy Conservation Products:	In Use at Miramar:	Water Conservation Products:	In Use at Miramar:
Refrigerators and Freezers			
Griddles			
Fryers			
Hot Food Holding Cabinets			
Pressure-less Steamers			
Beverage Vending Machines			
Ice Machines			
Pre-Rinse Spray Valves			

Lighting Equipment

Energy Conservation Products:	In Use at Miramar:	Water Conservation Products:	In Use at Miramar:
Compact Fluorescent Lamps	✓		
Fluorescent Tube Lamps			
Fluorescent Ballasts			
Fluorescent Luminaries			
Downlight Luminaries			
Industrial HID Luminaries			
Lighting Controls	✓		
More Lighting Guidance (See FEMP website)			
Light Fixtures	✓		
LED Lighting			
Decorative Light Strings			

Office Equipment

Energy Conservation Products:	In Use at Miramar:	Water Conservation Products:	In Use at Miramar:
Computers	✓		
Monitors	✓		
Printers	✓		
Fax Machines	✓		
Copiers	✓		
Printers, Scanners, and All-in-Ones			
Cordless Phones			
Digital Duplicators			
External Power Adapters			
Notebook Computers/Tablet PCs			
Mailing Machines			
Water Coolers			

Plumbing Products

Energy Conservation Products:	In Use at Miramar:	Water Conservation Products:	In Use at Miramar:
Faucets		Bathroom Sink Faucets	✓
Showerheads		Flushing Urinals	
Urinals		Showerheads	
		Landscape Irrigation Services	✓
		High-Efficiency Toilets	✓

Other Efficient Technologies

Energy Conservation Products:	In Use at Miramar:	Water Conservation Products:	In Use at Miramar:
Low Standby Power	✓		

In order for a renewable energy source, either electric or non-electric, to qualify as a new renewable energy source for the purpose of meeting the EO 13423 requirement, the renewable energy source must be placed into service after January 1, 1999. Examples include but are not limited to:

- **Biomass** - Any lignin waste material that is segregated from other waste materials and is determined to be non-hazardous by the Administrator of the EPA, and any solid, non-hazardous cellulosic material that is derived from the following:

- Any of the following forest-related resources: mill residues, precommercial thinnings, slash, and brush, or non-merchantable material;
 - Solid wood waste materials, including waste pallets, crates, dunnage, manufacturing and construction wood wastes (other than pressure-treated, chemically treated, or painted wood wastes), and landscape or right-of-way tree trimmings, but not including municipal solid waste (garbage), gas derived from the bio-degradation of solid waste, or paper that is commonly recycled;
 - Agricultural wastes, including orchard tree crops, vineyard, grain, legumes, sugar and other crop by-products or residues, and livestock waste nutrients; or
 - A plant that is grown exclusively as a fuel for the production of electricity.
- **Waste to Energy** - Municipal solid waste and refuse-derived fuels are included.
 - **Landfill Gas** - Landfill gas is the methane generated as waste decomposes. Wastewater treatment digester gas and other gas derived from the bio-degradation of waste also qualify under this category.
 - **Geothermal Energy** - This category includes electric energy from geothermal sources.
 - **Solar Energy** - Solar energy for production of electrical energy includes but is not limited to photovoltaics and concentrating solar power.
 - **Ocean Energy** - Ocean Energy includes but is not limited to electric energy from tidal, wave, current, and ocean thermal energy conversion (OTEC).
 - **Hydropower** - For the purpose of the EAct 2005 requirement, hydropower energy qualifies as renewable energy if it is from new hydroelectric generation capacity achieved from increased efficiency or addition of new capacity at an existing hydroelectric project. Hydroelectric generation capacity is “new” if it was placed in service after January 1, 1999, consistent with the definition of new in EO 13423.
 - **Hydrokinetic** - Hydrokinetic energy technology extracts energy from moving water without relying on dams to create hydrostatic energy potential. Hydrokinetic energy is also known as ‘run of river’. Hydrokinetic energy used as electricity qualifies as renewable energy for meeting the EAct 2005 and EO 13423 requirement.
 - **Wind Energy** - All sources of wind energy are included.
 - **Renewable Energy Certificates or RECs from Qualifying Sources** - certificates, renewable energy credits, or tradable renewable certificates, -- represent the technology and environmental (non-energy) attributes of energy generated from renewable sources. Renewable energy credits for electricity are usually sold in 1 megawatt-hour (MWh) units. A certificate can be sold separately from the mega-watt hour of generic electricity with which it is associated. This flexibility enables customers to offset a percentage of their annual energy use with certificates generated elsewhere. RECs from renewable sources of electricity defined in this section may be used to meet the EAct 2005 Goal and EO 13423 goal. RECS from “new” renewable sources of electricity may be used to meet the requirement of EO 13423. RECs from non-electric sources of renewable energy may also be used to meet the EO 13423 requirement concerning new sources of renewable energy. Their contribution will be reported under the EO 13423 requirement,

but they cannot be used to meet the EPA 2005 Requirement. For a more detailed description visit the “Federal Renewable Energy Requirement Guide” at: http://www1.eere.energy.gov/femp/pdfs/epact05_fedrenewenergyguid.pdf.

Where to Find Appropriate Products

The following websites will assist MCAS Miramar personnel in finding energy and water efficient products:

- **GSA Advantage:**
Look for the Energy Star® symbol, and FEMP symbol.
<https://www.gsaadvantage.gov/advgsa/advantage/search/specialCategory.do?cat=ADV.ENV>
- **DoD EMALL:**
All users are required to register and be authenticated and authorized by a DLIS Access Administrator. DOD EMALL now has over 1450 commercial catalogs with over 32 million items available to our registered users. This allows you to cross-catalog shop, create carts and order items from more than one source at a time, thereby saving time by not going to each catalog separately to place an order. Customers on DOD EMALL can order using a GPC or by MILSTRIP/FEDSTRIP for some items.
www.dlis.dla.mil/emall.asp
- **DoE Renewable Energy**
The DoE’s FEMP has developed ways to help you tap into clean, secure energy resources. It provides options available for facilities that include; solar water heating, passive solar design, photovoltaic (PV), wind, biomass or another renewable energy system (or group of them). It also provides options for buying renewable power. A complete FEMP Renewable Energy Overview is available for downloading at www1.eere.energy.gov/femp/renewable_energy/index.html.
- **altE:**
altE identifies renewable energy products for purchase and provides information and guides for alternative energy solutions. Note: website listing is for suggestions and is not an endorsement of products. Visit home.altenergystore.com/ for more information.
- To identify products that are categorized as EPA WaterSense-certified (and support FEMP water conservation BMPs) consult the EPA WaterSense website at www.epa.gov/WaterSense/pp/het.htm.

Energy-efficient and water efficient products are available from many commercial sources. Look for Energy Star® or WaterSense symbol. The following is a list of the most commonly visited commercial sources:

- To identify products that meet the Federal low standby power mode requirements consult the FEMP website at oahu.lbl.gov/
- The WBDG also offers technical resource pages for facility energy conservation, renewable energy, and water conservation at www.wbdg.org/design/index.php?cn=3.8.3&cx=0.

Alternative Fuels and Fuel Efficiency

The EPO Act and EO 13423 were passed with the goal of enhancing our nation's energy security and improving environmental quality. Both laws address the aspects of energy supply and demand, including energy efficiency, alternative fuels and renewable energy, as well as more traditional forms of energy such as coal, oil, and nuclear power.

EO 13423 requires agencies to (1) increase purchases of alternative fuel, hybrid, and plug-in hybrid electric vehicles when commercially available; (2) reduce petroleum consumption in fleet vehicles by 2 percent annually through 2015; (3) Increase alternative fuel consumption at least 10 percent annually; (4) reduce energy intensity by 3 percent annually through 2015 or by 30 percent by 2015 to reduce greenhouse gases; and (5) at least 50 percent of current renewable energy purchases must come from new renewable sources (in service after January 1, 1999). Approved measures include AFV acquisition; use of alternative fuels; acquisition of vehicles with higher fuel economy (including hybrids); substitution of cars for light trucks; a decrease in vehicle miles traveled; and a decrease in fleet size.

EPO Act 2005 covers numerous topics in the area of alternative fuels, fuel efficiency, and renewable energy such as; alternative energy sources, reduction in fossil fuel use, and sustainable building design. It requires certain fleets to acquire AFVs, which are capable of operating on non-petroleum fuels. Title III of EPO Act states that of the total number of vehicles acquired by a Federal fleet after 1999, 75 percent shall be AFVs.

The requirements under EPO Act 2005 include, but are not limited to:

- Requires Federal agencies to arrange for refueling of AFVs at commercial fueling facilities that offer alternative fuels for sale. If these facilities are not convenient or accessible, agencies may enter into commercial arrangements including purchase, lease, contract, or construction of alternative fuel stations.
- EPO Act 2005 directs the Federal government to increase its renewable energy use, with a goal of using:
 - 3 percent or more in FYs 2007 through 2009,
 - 5 percent or more in FYs 2010 through 2012,
 - 7.5 percent or more by 2013.
- Requires that dual-fueled vehicles be operated on alternative fuels unless the agency qualifies for a waiver.

Table B-3 illustrates the fuel types of vehicles owned by MCAS Miramar. Table B-4 illustrates the fuel types of MCAS Miramar vehicles leased from GSA.

Table B-3. MCAS Miramar-owned Vehicles

Fuel Type	Number in MCAS Miramar-owned Fleet	Percent of MCAS Miramar-owned Fleet
Biodiesel	107	46%
Propane	70	30%
Electric	47	20%
Unleaded Gasoline	8	4%

*Inventory current as of June 2009.

Table B-4. MCAS Miramar-leased GSA Vehicles

Fuel Type	Number in MCAS Miramar-leased Fleet	Percent of MCAS Miramar-leased Fleet
Unleaded Gasoline	102	38%
Ethanol / Unleaded Gasoline	102	38%
Compressed Natural Gas (CNG)	39	14%
CNG / Unleaded Gasoline	14	5%
Diesel	9	3%
Hybrid Electric	4	2%

*Inventory current as of June 2009.

Exemptions

Military tactical vehicles, defined as motor vehicles (excluding general-purpose motor vehicles) designed to military specification or a commercially designed motor vehicle modified to military specification to meet direct transportation support of combat or tactical operations and protection of nuclear weapons. These vehicles are inherently mission-critical and are used for no other purpose.

Where to Find Appropriate Products

These websites will assist MCAS Miramar in finding AFVs, alternative fuels, and fuel efficient vehicles:

- GSA’s Vehicle Leasing Program:**
 GSA offers AFVs through their vehicle buying leasing program. Look for the “Alternative Fuel Vehicles” selection.
www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_OVERVIEW&contentId=25434)

- **DoE Alternative Fuels Data Center:**
The center provides a wide range of information and resources to enable the use of alternative fuels in addition to other petroleum reduction options such as advanced vehicles, fuel blends, idle reduction, and fuel economy. The Center provides information on Data Analysis and Trends, Alternative Fuel, Alternative Fuel Vehicle Information, and AFDC tools such as: vehicle searches, fuel station locators; State and Federal Incentives and Laws.
(www.afdc.energy.gov/afdc/index.html)
- **DoE Clean Cities Program:**
Clean Cities strives to advance the nation's economic, environmental, and energy security by supporting local decisions to adopt practices that contribute to the reduction of petroleum consumption. Clean Cities has a network of approximately 90 volunteer coalitions, which develop public/private partnerships to promote alternative fuels and advanced vehicles, fuel blends, fuel economy, hybrid vehicles, and idle reduction. Clean Cities is part of the Office of Energy Efficiency and Renewable Energy's Vehicle Technologies Program. The website provides in-depth information behind systems materials, engines, and electronic technologies.
(www1.eere.energy.gov/cleancities/)
- **DoE Vehicle Technologies Program:**
The Vehicle Technologies Program is developing more energy efficient and environmentally friendly highway transportation technologies that will enable America to use less petroleum. The long-term aim is to develop "leap frog" technologies that will provide Americans with greater freedom of mobility and energy security, while lowering costs and reducing impacts on the environment.
(www1.eere.energy.gov/vehiclesandfuels/)
- **DoE Fuel Economy**
The Fuel Economy website sponsored by DoE provides vehicle searches and comparison tools, ratings, an energy impact tool, tax incentives and various other tips and information.
(www.fueleconomy.gov/)
- **DoE Biomass Program:**
The DoE Biomass Program is research development in biomass feedstocks and conversion technologies. Geared toward the development of integrated bio-refineries, the Biomass Program is helping transform the nation's renewable and abundant biomass resources into cost competitive, high performance biofuels, bioproducts, and biopower.
(www.eere.energy.gov/biomass/)
- **Defense Energy Support Center's (DESC)/ Alternative Fuels Information Station (AFIS):**
DESC supplies Federal agencies with alternative fuels, including biodiesel (B20) and E85. The AFIS site contains tutorials about the alternative fuel acquisition process; EPAAct compliance, E85, biodiesel, Synthetic, and alternative fuel logistics.
(www.desc.dla.mil/DCM/DCMPage.asp?PageID=591)
- **EPA's Green Vehicle Guide:**
The EPA "Green Vehicle Guide" is a tool for choosing the cleanest and most FEVs that

will meet the Base's needs. This guide provides information about the environmental performance of vehicles based on emissions levels, air pollution, fuel economy values, and global warming impacts. It does not account for other environmental factors, such as recyclability of the vehicle, or other consumer preferences such as safety, cost, or driving performance. Users of the "Green Vehicle Guide" can research ratings for specific vehicles, or view a list of the ratings for all current-year vehicles.

[\(www.epa.gov/greenvehicles/\)](http://www.epa.gov/greenvehicles/)

USDA Biobased Products

Biobased products are commercial or industrial products (other than food or feed) that are composed in whole or in significant part with biological products or renewable domestic agricultural materials (including plant, animal, and marine materials) or forestry materials; are usually biodegradable; and can be returned to the earth at the end of their useful life or recycled and used again. Because biobased products provide markets for U.S. farm products and also reduce dependence on fossil energy (particularly imported oil), their use contributes to the nation's energy, economic, and environmental security.

Section 9002 of the FSRIA of 2002 (amended in 2008) establishes a Federal biobased products purchasing program similar to the buy-recycled program under RCRA. USDA will designate biobased products and provide guidance for purchasing the products with biobased content. USDA also will establish a voluntary biobased products labeling program. Biobased products are excellent alternatives to existing products and are important for several reasons:

- Creates new markets for farmers;
- Promotes redevelopment in many rural counties;
- Enhances energy security;
- Protects the environment;
- Stimulates technologies;
- Helps to perform missions cost-effectively;
- Makes good business sense;
- Promotes sustainable environmental stewardship; and
- Enhances partnership with industry.

Federal agencies are required to develop GPPs for purchasing the USDA-designated products. The Task Force and the OFPP recommend that agencies expand their recycled content product GPPs to include biobased products. Biobased item designation lists will be published in the CFR at 7 CFR Part 2902. Once USDA publishes a product list, Federal agencies must purchase the biobased items on USDA's list, and update their GPP to include new products each time USDA publishes a rule designating additional items. USDA provides guidance for purchasing these items with biobased content.

There will be some overlap between the EPA CPG list for recycled-content purchasing and the new USDA list for biobased item purchasing. With regard to choosing between a biobased product and a recycled-content product the Farm Bill states, "any procurement, by any Federal agency, which is subject to the regulations of the Administrator under Section 6002 of the Solid Waste Disposal Act (42 U.S.C. 6962), shall not be subject to the requirements of this section to the extent that such requirements are inconsistent with such regulations." However, this does not mean that CPG requirements must automatically be followed in place of biobased

purchasing. Purchasers should look at the benefits and costs of both types of products, and select the one that provides the best value overall.

Table B-5. USDA-designated Biobased Items and Their Minimum Biobased Content

Biobased Category	Description	Minimum Biobased Content
ROUND 1		
Bedding, Bed Linens, and Towels	(1) Bedding is that group of woven cloth products used as coverings on a bed. Bedding includes products such as blankets, bedspreads, comforters, and quilts. (2) Bed linens are woven cloth sheets and pillowcases used in bedding. (3) Towels are woven cloth products used primarily for drying and wiping.	12%
Diesel Fuel Additives	(1) Any substance, other than one composed solely of carbon and/or hydrogen that are intentionally added to diesel fuel (including any added to a motor vehicle's fuel system) and that is not intentionally removed prior to sale or use. (2) Neat biodiesel, also referred to as B100, when used as an additive. Diesel fuel additive does not mean neat biodiesel when used as a fuel or blended biodiesel fuel (e.g., B20).	90%
Hydraulic Fluids - Mobile Equipment	Hydraulic fluids formulated for general use in non-stationary equipment, such as tractors, end loaders, or backhoes.	44%
Penetrating Lubricants	Products formulated to provide light lubrication and corrosion resistance in close tolerant internal and external applications including frozen nuts and bolts, power tools, gears, valves, chains, and cables.	68%
Roof Coatings	Coatings formulated for use in commercial roof deck systems to provide a single-coat monolith coating system.	20%
Water Tank Coatings	Coatings formulated for use in potable water storage systems.	59%
ROUND 2		
Adhesive and Mastic Removers	Solvent products formulated for use in removing asbestos, carpet, and tile mastics as well as adhesive materials, including glue, tape, and gum, from various surface types.	58%
Composite Panels - Acoustical	Engineered products designed for use as structural and sound deadening material suitable for office partitions and doors.	37%
Composite Panels - Interior Panels	Engineered products designed specifically for interior applications and providing a surface that is impact-, scratch-, and wear-resistant and that does not absorb or retain moisture.	55%
Composite Panels - Plastic Lumber	Engineered products suitable for non-structural outdoor needs such as exterior signs, trash can holders, and dimensional letters.	23%

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Biobased Category	Description	Minimum Biobased Content
Composite Panels - Structural Interior Panels	Engineered products designed for use in structural construction applications, including cabinetry, casework, paneling, and decorative panels.	89%
Composite Panels - Structural Wall Panels	Engineered products designed for use in structural walls, curtain walls, floors and flat roofs in commercial buildings.	94%
Disposable Containers	Products designed to be used for temporary storage or transportation of materials including, but not limited to, food items.	72%
Fertilizers	Products formulated or processed to provide nutrients for plant growth and/or beneficial bacteria to convert nutrients into plant usable forms. Biobased fertilizers, which are likely to consist mostly of biobased components, may include both biobased and chemical components.	71%
Fluid-Filled Transformers - Synthetic Ester-Based	Electric power transformers that are designed to utilize a synthetic ester-based dielectric (non-conducting) fluid to provide insulating and cooling properties.	66%
Fluid-Filled Transformers - Vegetable Oil-Based	Electric power transformers that are designed to utilize a vegetable oil-based dielectric (non-conducting) fluid to provide insulating and cooling properties.	95%
Graffiti and Grease Removers	Industrial solvent products formulated to remove automotive, industrial, or kitchen soils and oils, including grease, paint, and other coatings, from hard surfaces.	34%
Hand Cleaners and Sanitizers - Hand Cleaners	Products formulated for personal care use in removing a variety of different soils, greases, and similar substances from human hands with or without the use of water.	64%
Hand Cleaners and Sanitizers - Hand Sanitizers	Products formulated for personal care use in removing bacteria from human hands with or without the use of water. Personal care products that are formulated for use in removing a variety of different soils, greases and similar substances and bacteria from human hands with or without the use of water are classified as hand sanitizers for the purposes of this rule.	73%
Plastic Insulating Foam for Residential and Commercial Construction	Spray-in-place plastic foam products designed to provide a sealed thermal barrier for residential or commercial construction applications.	7%
Sorbents	Materials formulated for use in the cleanup and automotive, industrial, or kitchen soils and oils, including grease, paint, and other coatings, from hard surfaces.	89%

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Biobased Category	Description	Minimum Biobased Content
ROUND 3		
2-Cycle Engine Oils	Lubricants designed for use in 2-cycle engines to provide lubrication, decreased spark plug fouling, reduced deposit formation, and/or reduced engine wear.	34%
Carpet and Upholstery Cleaners - General Purpose	Cleaning products formulated specifically for use in cleaning carpets and upholstery, through a dry or wet process, found in locations such as houses, cars, and workplaces. Carpet and upholstery cleaners formulated for use in cleaning large areas such as the carpet in an entire room or the upholstery on an entire piece of furniture.	54%
Carpet and Upholstery Cleaners - Spot Removers	Cleaning products formulated specifically for use in cleaning carpets and upholstery, through a dry or wet process, found in locations such as houses, cars, and workplaces. Carpet and upholstery cleaners formulated for use in removing spots or stains in a small confined area.	7%
Carpets	Floor coverings composed of woven, tufted, or knitted fiber and a backing system.	7%
Disposable Cutlery	Hand-held, disposable utensils designed for one-time use in eating food.	48%
Dust Suppressants	Products formulated to reduce or eliminate the spread of dust associated with gravel roads, dirt parking lots, or similar sources of dust, including products used in equivalent indoor applications.	85%
Films - Non-Durable	Products that are used in packaging, wrappings, linings, and other similar applications. Films that are intended for single use for short-term storage or protection before being discarded. Non-durable films that are designed to have longer lives when used are included in this item.	85%
Films - Semi-Durable Films	Products that are used in packaging, wrappings, linings, and other similar applications. Films that are designed to resist water, ammonia, and other compounds, to be re-used, and to not readily biodegrade. Products in this item are typically used in the production of bags and packaging materials.	45%
Glass Cleaners	Cleaning products designed specifically for use in cleaning glass surfaces, such as windows, mirrors, car windows, and computer monitors.	49%
Greases	Lubricants composed of oils thickened to a semisolid or solid consistency using soaps, polymers or other solids, or other thickeners. Greases that are not otherwise covered by the other grease subcategories.	75%
Greases - Food Grade	Lubricants composed of oils thickened to a semisolid or solid consistency using soaps, polymers or other solids, or other thickeners. Lubricants that are designed for use on food-	42%

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Biobased Category	Description	Minimum Biobased Content
	processing equipment as a protective anti-rust film, as a release agent on gaskets or seals of tank closures, or on machine parts and equipment in locations in which there is exposure of the lubricated part to food.	
Greases - Multipurpose	Lubricants composed of oils thickened to a semisolid or solid consistency using soaps, polymers or other solids, or other thickeners. Lubricants that are designed for general use.	72%
Greases - Rail Track	Lubricants that are designed for use on food-processing equipment as a protective anti-rust film, as a release agent on gaskets or seals of tank closures, or on machine parts and equipment in locations in which there is exposure of the lubricated part to food. Lubricants that are designed for use on railroad tracks or heavy crane tracks.	30%
Greases - Truck	Lubricants composed of oils thickened to a semisolid or solid consistency using soaps, polymers or other solids, or other thickeners. Lubricants that are designed for use on the fifth wheel of tractor trailer trucks onto which the semi-trailer rests and pivots.	71%
Hydraulic Fluids - Stationary Equipment	Fluids formulated for use in stationary hydraulic equipment systems that have various mechanical parts, such as cylinders, pumps, valves, pistons, and gears, that are used for the transmission of power (and also for lubrication and/or wear, rust, and oxidation protection).	44%
Lip Care Products	Personal care products formulated to replenish the moisture and/or prevent drying of the lips.	82%
ROUND 4		
Bathroom and Spa Cleaners	Products that are designed to clean and/or prevent deposits on surfaces found in bathrooms and spas including, but not necessarily limited to, bath tubs and spas, shower stalls, shower doors, shower curtains, and bathroom walls, floors, doors, and counter and sink tops. Products in this item may be designed to be applied to a specific type of surface or to multiple surface types. They are available both in concentrated and ready-to-use forms.	74%
Concrete and Asphalt Release Fluids	Products that are designed to provide a lubricating barrier between the composite surface materials (e.g., concrete or asphalt) and the container (e.g., wood or metal forms, truck beds, roller surfaces).	87%
De-Icers - General Purpose	Chemical products (e.g., salt, fluids) that are designed to aid in the removal of snow and/or ice, and/or in the prevention of the buildup of snow and/or ice, in general use applications by lowering the freezing point of water. Specialized deicing products, such as those used to de-ice aircraft and airport runways, are not included.	93%

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Biobased Category	Description	Minimum Biobased Content
Firearm Lubricants	Lubricants that are designed for use in firearms to reduce the friction and wear between the moving parts of a firearm and to keep the weapon clean and prevent the formation of deposits that could cause the weapon to jam.	49%
Floor Strippers	Products that are formulated to loosen waxes, resins, or varnishes from floor surfaces. They can be in either liquid or gel form, and may also be used with or without mechanical assistance.	78%
Laundry Products - General Purpose	Products that are designed to clean, condition, or otherwise affect the quality of the laundered material. Such products include but are not limited to laundry detergents, bleach, stain removers, and fabric softeners. These are laundry products used for regular cleaning activities.	34%
Laundry Products - Pretreatment/Spot Removers	Products that are designed to clean, condition, or otherwise affect the quality of the laundered material. Such products include but are not limited to laundry detergents, bleach, stain removers, and fabric softeners. These are laundry products specifically used to pre-treat laundry to assist in the removal of spots and stains during laundering.	46%
Metalworking Fluids - General Purpose Soluble, Semi-Synthetic, and Synthetic Oils	Fluids that are designed to provide cooling, lubrication, corrosion prevention, and reduced wear on the contact parts of machinery used for metalworking operations such as cutting, drilling, grinding, machining, and tapping. Metalworking fluids formulated for use in a re-circulating fluid system to provide cooling, lubrication, and corrosion prevention when applied to metal feedstock during normal grinding and machining operations.	57%
Metalworking Fluids - High Performance Soluble, Semisynthetic, and Synthetic Oils	Fluids that are designed to provide cooling, lubrication, corrosion prevention, and reduced wear on the contact parts of machinery used for metalworking operations such as cutting, drilling, grinding, machining, and tapping. Metalworking fluids formulated for use in a re-circulating fluid system to provide cooling, lubrication, and corrosion prevention when applied to metal feedstock during grinding and machining operations involving unusually high temperatures or corrosion potential.	40%
Metalworking Fluids - Straight Oils	Fluids that are designed to provide cooling, lubrication, corrosion prevention, and reduced wear on the contact parts of machinery used for metalworking operations such as cutting, drilling, grinding, machining, and tapping. Metalworking fluids that are not diluted with water prior to use and are generally used for metalworking processes that require lubrication rather than cooling.	66%
Wood and Concrete Sealers - Membrane	Products that are penetrating liquids formulated to protect wood and/or concrete, including masonry and fiber cement	11%

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Biobased Category	Description	Minimum Biobased Content
Concrete Sealers	siding, from damage caused by insects, moisture, and decaying fungi and to make surfaces water resistant. Concrete sealers that are formulated to form a protective layer on the surface of the substrate.	
Wood and Concrete Sealers - Penetrating Liquids	Products that are penetrating liquids formulated to protect wood and/or concrete, including masonry and fiber cement siding, from damage caused by insects, moisture, and decaying fungi and to make surfaces water resistant. Wood and concrete sealers that are formulated to penetrate the outer surface of the substrate.	79%
ROUND 5 (Proposed)		
Chain and Cable Lubricants	Products designed to provide lubrication in such applications as bar and roller chains, sprockets, and wire ropes and cables. Products may also prevent rust and corrosion in these applications.	77%
Corrosion Preventatives	Products designed to prevent the deterioration (corrosion) of metals.	53%
Food Cleaners	Anti-microbial products designed to clean the outer layer of various food products, such as fruit, vegetables, and meats.	53%
Forming Lubricants	Products designed to provide lubrication during metalworking applications that are performed under extreme pressure. Such metalworking applications include tube bending, stretch forming, press braking, and swaging.	68%
Gear Lubricants	Products, such as greases or oils, that are designed to reduce friction when applied to a toothed machine part (such as a wheel or cylinder) that meshes with another toothed part to transmit motion or to change speed or direction.	58%
General Purpose Household Cleaners	Products designed to clean multiple common household surfaces. This designated item does not include products that are formulated for use as disinfectants. Task-specific cleaning products, such as spot and stain removers, upholstery cleaners, bathroom cleaners, glass cleaners, etc., are not included in this item.	39%
Industrial Cleaners	Products used to remove contaminants, such as adhesives, inks, paint, dirt, soil, and grease, from parts, products, tools, machinery, equipment, vessels, floors, walls, and other production-related work areas. The cleaning products within this item are usually solvents, but may take other forms. They may be used in either straight solution or diluted with water in pressure washers, or in hand wiping applications in industrial or manufacturing settings, such as inside vessels. Task-specific cleaners used in industrial settings, such as parts wash solutions, are not included in this definition.	41%

Biobased Category	Description	Minimum Biobased Content
Multipurpose Cleaners	Products used to clean dirt, grease, and grime from a variety of items in both industrial and domestic settings. This designated item does not include products that are formulated for use as disinfectants.	56%
Parts Wash Solutions	Products that are designed to clean parts in manual or automatic cleaning systems. Such systems include, but are not limited to, soak vats and tanks, cabinet washers, and ultrasonic cleaners.	65%

Exemptions

Per USDA’s final rule, “Guidelines for Designating Biobased Products for Federal Procurement”; (70 FR 1792, 11 January 2005), states that Federal procurement programs should favor items composed of the highest percentage of biobased product practicable, except when such items:

- Are not available within a reasonable time;
- Fail to meet performance standards in applicable specifications or the reasonable performance standards of the agency; or
- Are available only at an unreasonable price.

Note that these are the same exemption criteria that apply to the GPP recovered materials program; however, written exemptions are not required when a biobased product is not selected. Also, FSRIA does not authorize extending the biobased guidelines to state and local agencies using appropriated Federal funds to procure qualifying biobased items, or to persons contracting with such agencies with respect to work performed under such contracts. However, for the sake of consistency, it is recommended to keep the exemption criteria’s the same on MCAS Miramar documentation to diffuse any confusion that may arise

Where to Find Appropriate Products

These websites will assist MCAS Miramar in finding USDA biobased products:

- **USDA BioPreferred:**
Provides Federal agencies with information that will help them meet requirements to purchase biobased products such as: policy guidance, designated items list and a catalog with products and manufacturer, how and where to purchase products as well as an assortment of other information.
(www.biopreferred.gov/Default.aspx)
- **GSA Advantage!:**
GSA has introduced biobased products to its offerings which are identified with a small sunrise icon labeled “Biobased”. In the Environmental section select the BioBased icon to search for various products.
(www.gsaadvantage.gov/advgsa/advantage/main/start_page.do)

- **DoD EMALL:**
All users are required to register and be authenticated and authorized by a DLIS Access Administrator. DoD EMALL now has over 1450 commercial catalogs with over 32 million items available to our registered users. This allows you to cross-catalog shop, create carts and order items from more than one source at a time, thereby saving time by not going to each catalog separately to place an order. Customers on DoD EMALL can order using a GPC or by MILSTRIP/FEDSTRIP for some items.
(www.dlis.dla.mil/email.asp)
- **United Soybean Board:**
Look for “Products Guide,” which offers consumer and industrial biobased products.
(www.unitedsoybean.org/newuses/)
- **The National Corn Growers Association (NCGA):**
NCGA and has been instrumental in the development of new uses for corn through value-added initiatives and provides this database of information on availability of corn-based products for industrial and consumer use.
(lepton.marz.com/ncga/comm_dev_center/index_PG.asp)
- **DoE Biomass Program:**
The DoE Biomass Program is research development in biomass feedstocks and conversion technologies. Geared toward the development of integrated bio-refineries, the Biomass Program is helping transform the nation’s renewable and abundant biomass resources into cost competitive, high performance biofuels, bioproducts, and biopower.
(www.eere.energy.gov/biomass/)
- **OFEE:**
The OFEE provides rules, reporting procedures, and tools and resources for the biobased products program.
(www.ofee.gov/gp/bioprod.asp)
- **NISH:**
NISH is a source for janitorial services and is actively working to become a leader in green cleaning practices, including biobased product use. A report on their website explains this initiative.
([www.nish.org/NISH/Rooms/DisplayPages/LayoutInitial?Container=com.webridge.entity.Entity\[OID\]24BD2A456022C845ABAA178C057BB911](http://www.nish.org/NISH/Rooms/DisplayPages/LayoutInitial?Container=com.webridge.entity.Entity[OID]24BD2A456022C845ABAA178C057BB911))
- **New Uses Council (NUC):**
NUC is a non-profit membership organization dedicated to the development and commercialization of biobased products.
(www.newuses.org/index.html)
- **Biobased Information System (BIS):**
The BIS is a gateway to commercial information about bioproducts, biofuels, and bioenergy. The BIS can be searched for daily business news links to other global initiatives and to network with other organizations.
(biobased.org/)

Non-ozone Depleting Substances

ODSs are substances that deplete the earth's protective ozone layer. They are widely used in refrigerators, air conditioners, fire extinguishers, in dry cleaning, as solvents for cleaning, electronic equipment and as agricultural fumigants. ODSs include chlorofluorocarbons, Halon, hydrochlorofluorocarbons and methyl bromide. Around the World, Countries have agreed to phase out ODSs through the Montreal Protocol, passed in 1987, on Substances that Deplete the Ozone Layer. Some industries that use ODSs are replacing them with synthetic greenhouse gases, or non-ozone-depleting substances.

To implement the Montreal Protocol, the US enacted Title VI of the Clean Air Act (CAA) Amendments of 1990 (40 CFR Part 82) to phase out Class I and Class II ODS production. For a list of Class I and Class II ODSs visit www.epa.gov/ozone/science/ods/index.html. EO 13423, DoD and USAF policies direct bases to follow this mandate in planning for the phase-out and replacements of these environmentally harmful chemicals.

The CAA required the EPA to establish a program to identify alternatives to Class I (CFCs, halons, carbon tetrachloride, methyl chloroform, methyl bromide, and HBFCs) and Class II (HCFC) ODSs and to publish lists of acceptable and unacceptable substitutes. These lists are managed by EPA's SNAP program. The list of alternatives is shown in Table 5.5.3 (Table is on EPA's website) of the "Green Products" section. It is illegal to replace a Class I or Class II substance with any substitute which the EPA Administrator has deemed unacceptable.

Production of Class I ODS has ceased as of 31 December 1995. All DON requirements for Class I ODS must be approved by a Senior Acquisition Official (SAO) and the product must be acquired from the ODS Reserve. Production of Class II ODSs is being phased out by 2020, except HCFC-123 will be phased out by 2030. The AF will not develop or procure any new weapon or facility systems scheduled to remain in the AF inventory beyond 01 January 2020 that require Class II ODS in their operations or maintenance except HCFC-123 which will be phased out 01 January 2030. Building construction, renovation and maintenance products; products for metals cleaning, electronics cleaning and precision cleaning; and products used in fire suppression systems can all contain ODS.

MCAS Miramar is required to fill all mission critical Class I ODS requirements from the DLA ODS Reserve, and find alternatives to the continued use of Class I and Class II ODSs by purchasing SNAP-approved alternatives.

Table B-6. Recommended Replacements for Common CFCs and HCFCs

Non-ODS Refrigerant	Applications	Replaces
HFC-134A	Chillers Appliances Commercial Refrigeration	CFC-12
R-404A	Low-Temp Commercial (freezers, coolers)	CFC-502
R-507	Low-Temp Commercial (freezers, coolers)	CFC-502
R-407C	Commercial Rooftop (A/C) Units Positive Displacement A/C Equipment Existing or New Residential and Light Commercial A/C	HCFC-22
R-410A	Positive Displacement A/C Equipment	HCFC-22
	New Residential and Light Commercial A/C (designed specifically for R-410a)	

Exemptions

Mission-critical requirements for banned Class I ODSs or HCFC 141b may still be acquired from the DLA ODS Reserve with approval by an SAO. These may include technical-order driven ODSs, Halons, and fire-extinguishing ODSs, which may still be required in flightlines and onboard aircraft.

Where to Find Appropriate Products

These websites will assist MCAS Miramar in finding Non-ozone depleting substances:

- **EPA SNAP Website:**
The SNAP Website identifies alternatives to ODS products and provides lists of acceptable and unacceptable substitutes.
(www.epa.gov/Ozone/snap/index.html)
- **GSA Advantage!:**
In the Environmental section select the SNAP icon to search for various products.
(www.gsaadvantage.gov/advgsa/advantage/main/start_page.do)
- **DoD EMALL:**
Registration is required. DoD EMALL has over 1450 commercial catalogs with over 32 million items available to our registered users. This allows you to cross-catalog shop, create carts and order items from more than one source at a time, thereby saving time by not going to each catalog separately to place an order. Customers on DoD EMALL can order using a GPC or by MILSTRIP/FEDSTRIP for some items.
(www.dlis.dla.mil/emall.asp)

- **EPA Database of Environmental Information for Products and Services:**
The database includes information on products that have reduced ozone-depleting potential.
(yosemite1.epa.gov/oppt/epstand2.nsf)

Environmentally Preferable Products (EPP)

The EO 13423 Implementing Instructions define "environmentally preferable" as "products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service."

EPP requires the identification of environmental attributes pertinent to a product or service and the acquisition of a product or service with those attributes. Whereas acquisition of most "green" products looks at a single attribute (e.g., percentage of recycled content, level of energy efficiency), acquisition of environmentally preferable products or services can look at multiple attributes (e.g., recycled content plus no or low emissions of volatile organic compounds [VOCs]). This allows the purchasing agency to tailor its acquisitions to the key environmental attributes relevant to its needs. Thus, for example, water-efficiency might be more important to a facility in the Southwest than to a facility located in other parts of the U.S.

The purchasing power of the Federal Government exerts a tremendous influence on which products and services are available in the national marketplace. The EPP Program works to ensure that Federal government's buying power is working to the greatest extent possible to increase availability of environmentally preferable products, which in turn minimizes environmental impacts. The benefits of such a program include:

- Improved ability to meet environmental goals;
- Improved worker safety and health;
- Reduced liabilities;
- Reduced health and disposal costs; and
- Increased availability of environmentally preferable products in the marketplace.

Exemptions

None identified for this element.

Where to Find Appropriate Products

These websites will assist MCAS Miramar in finding EPP products:

- **GSA Advantage!:**
In the Environmental section select the Environmentally Friendly icon to search for various products.
(https://www.gsadvantage.gov/advgsa/advantage/main/start_page.do)

- **DLIS:**
Provides access to products and information on them. It also offers a list of web-enabled products as well.
(www.dlis.dla.mil/prod.asp)
- **Database of Environmental Information for Products and Services:**
Searchable database of product-specific information developed by public and private organizations, both domestically and internationally, including:
 - Contract language, specifications, and policies,
 - Environmental standards and guidelines,
 - Lists of vendors that meet these standards, and
 - Other information (yosemite1.epa.gov/oppt/eppstand2.nsf)
- **DoD EMALL:**
Registration is required. DoD EMALL has over 1450 commercial catalogs with over 32 million items available to our registered users. This allows you to cross-catalog shop, create carts and order items from more than one source at a time, thereby saving time by not going to each catalog separately to place an order. Customers on DoD EMALL can order using a GPC or by MILSTRIP/FEDSTRIP for some items.
(www.dlis.dla.mil/emall.asp)
- **DLA's DSCR:** offers an environmental products catalog, re-refined oil and other environmentally friendly products and information
(www.dscr.dla.mil/environmental.htm)
- **EPEAT:**
EPEAT is a procurement tool to help institutional purchasers evaluate, compare, and select electronic equipment based on their environmental attributes. It provides various computer related electronic manufacturers and products that are EPEAT-registered at the bronze, silver or gold rating. It also provides the criteria list, background information, environmental benefits and various other information.
(www.epeat.net/Companies.aspx)
- **Promoting Green Purchasing: Tools and Resources to Quantify the Benefits of EPP:**
Guide outlining existing tools and resources that can help develop quantitative estimates of the projected benefits of making new EPP choices and to document the estimated benefits of past actions.
(www.epa.gov/opptintr/epp/tools/epp_metrics.pdf)
- **OFEE:**
Provides information on the EPP program.
(ofee.gov/gp/gp.asp)
- **Purchasing Impact Estimator:**
The Purchasing Impact Estimator (PIE) helps by giving an objective assessment of the degree to which an organization's purchases are having an environmental impact. PIE is designed to enable one to get your bearings and set priorities for EPP. Enter data on annual purchasing using purchasing categories. The tool enables one to match purchasing categories to those in its database for which life cycle assessment (LCA)

data are available. It then enables one to calculate and graphically visualize how much impact is associated with each of the purchasing categories, for a given category of environmental impact.

(pie.earthster.org/)

- **Federal Electronics Challenge (FEC)**

The Federal government has the opportunity to provide leadership in the environmentally sound and cost effective management of electronic assets throughout their life-cycle. The FEC assists Federal agencies and facilities to become leaders in electronics stewardship and face the challenges posed by electronics acquisition, use and disposal. For more information visit the website at

www.federalelectronicchallenge.net/.

Product Specific Tools

Building & Construction

- **OIKOS Green Building Source**

Oikos is a Website devoted to serving professionals whose work promotes sustainable design and construction.

(www.oikos.com/)

- **Federal Green Construction Guide for Specifiers:**

Comprehensive guide to procuring green building products and construction services within the Federal government. EPA partnered with the OFEE and the Whole Building Design Guide to develop the Guide for Specifiers.

(www.wbdg.org/design/greenspec.php)

- **Building for Environmental and Economic Sustainability (BEES):**

The BEES 3.0 software allows users to compare environmental and economic costs of competing products to assist in the selection of building materials.

(www.bfrl.nist.gov/oae/software/bees/)

- **Building Energy Software Tools Directory:**

Directory of over 340 building software tools for evaluating energy efficiency, renewable energy and sustainability in buildings.

(apps1.eere.energy.gov/buildings/tools_directory/subjects_sub.cfm)

- **WBDG Tools Index:**

Internet-based portal with information on a variety of desktop or Web-based tools used in the building industry.

(www.wbdg.org/tools/tools.php)

- **Indoor Air Quality Education and Analysis Model (I-BEAM):**

Computer model for building professionals and others interested in assessing and maintaining indoor air quality in commercial buildings.

(www.epa.gov/ipbpages/archive/v1/235.htm)

- **San Francisco's Green Building Project Reporting and Information Tool (GreenPRINT):**
Web-based application for city professionals who are working on all phases of the design and construction of municipal green building projects in San Francisco. The tool is easily adapted for use in other cities.
(www.sfgreenprint.org/)
- **Pharos:**
Pharos is a project of Healthy Building Network, in partnership with Center for Clean Products and Clean Technologies at the University of Tennessee and other organizations. The Pharos framework proposes categories of environmental concern for analysis of green building. These categories cover health, resource sustainability, and social justice (e.g., occupant exposure, renewable materials, and corporate responsibility).
(www.pharoslens.net/)

Cleaning

- **OFEE Green Cleaning P2 Calculator:**
Calculator that quantifies the projected environmental benefits of purchasing and using green janitorial services and products.
(www.ofee.gov/janitor/index.asp)

Electronics

- **EPEAT:**
Procurement tool to help institutional purchasers evaluate, compare, and select electronic equipment based on their environmental attributes. Provides various computer related electronic manufacturers and products that are EPEAT-registered at the bronze, silver or gold rating. Also provides the criteria list, background information, environmental benefits, and other information.
(www.epeat.net/Companies.aspx)
- **Electronics Environmental Benefits Calculator (EEBC):**
Calculator that estimates the environmental benefits of greening the purchase, use and disposal of electronics. The EEBC was developed by the University of Tennessee, with support from Abt Associates and Dillon Environmental Associates, under a cooperative agreement with EPA.
(erc.ra.utk.edu/ccpct/eebc/eebc.html)
- **Energy Star® Product Savings Calculators:**
Series of calculators that quantify the cost savings associated with using Energy Star® certified products over traditional models.
(www.energystar.gov/index.cfm?c=bulk_purchasing.bus_purchasing)

Fleets

- **DoE, Alternative Fuels Data Center:**
Database of fueling stations for compressed natural gas, 85 percent E85, LPG/propane, biodiesel, electric, hydrogen, and liquefied natural gas. Also includes a route mapper,

station counts, and customizable database queries.

(www.afdc.energy.gov/afdc/fuels/stations.html)

- **Federal Automotive Statistical Tool (FAST):**
Online system developed to assist Federal agencies in meeting the data reporting requirements related to fleet purchase and management. Use is limited to specified Federal officials.
(<https://fastweb.inel.gov/>)
- **EPA SmartWay:**
SmartWay identifies products and services that reduce transportation-related emissions.
(www.epa.gov/smartway/index.htm)
- **Hybrid Electric Vehicle (HEV) Cost Calculator Tool and Flex Fuel Vehicle (FFV) Cost Calculator Tools:**
Calculators that allow an organization to compare the costs, benefits, and emissions of HEVs and FFVs to those of conventional vehicles. Also had various other vehicle calculators. It can be used to compare single vehicles or full fleets.
(www.afdc.energy.gov/afdc/hev_calculator/fleet.php)

Paper

- **Paper Calculator:**
Calculator that allows an organization to compare the environmental impacts of different paper choices across the entire life cycle of five major grades of paper.
(www.edf.org/papercalculator/)

There are a multitude of procurement sources on the Web. This GPP Plan is not an exhaustive listing of all sources. For any further information on other EPP websites consult the EPA website at www.epa.gov/opptintr/epp/pubs/otherepp.htm.

EPA Priority Chemicals

Twenty-eight organic chemicals are included in the EPA Priority Chemicals (PCs) list. The organic chemicals included in the list of PCs were selected following an Agency-wide expert review of scientific information available on them. EPA experts reviewed scientific information made available to the public in 1998 and scientific information received from commenters in response to the 1998 Notice of Availability. Based on its review, EPA concluded that 27 organic chemicals are persistent, bioaccumulative, and toxic (PBT). PBTs are currently being generated in industrial waste and are found in soil, sediment, ground water, surface water, air, and plant, animal, and human tissue as a result of past and present releases. Even when released in very small amounts, they accumulate and can cause environmental problems. Many of these organics are difficult to clean up once they get into the environment, resulting in costly cleanup efforts. Polychlorinated biphenyls (PCBs) were added to the list in 2004 because of their chemical properties.

In addition to the organics, three metals are included in the list. The metals include cadmium, lead, and mercury. These metals and their compounds are known to occur frequently in industrial wastes and often trigger RCRA's Toxicity Characteristic criteria, requiring the wastes

to be managed under RCRA hazardous waste regulations. These metals are also a high priority in international waste minimization efforts to which the U.S. has commitments. Table B-7 lists the 31 Priority Chemicals.

Table B-7. EPA Priority Chemicals

Priority Chemicals	
Organic Chemicals and Chemical Compounds	CAS Number
1,2,4-Trichlorobenzene	120-82-1
1,2,4,5-Tetrachlorobenzene	95-94-3
2,4,5-Trichlorophenol	95-95-4
4-Bromophenyl phenyl ether	101-55-3
Acenaphthene	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
Benzo(g,h,i)perylene	191-24-2
Dibenzofuran	132-64-9
Dioxins/Furans (considered one chemical on this list)	1746-01-6
Endosulfan, alpha & Endosulfan, beta (considered one chemical on this list)	959-98-8
	33213-65-9
Fluorene	86-73-7
Heptachlor & Heptachlor epoxide (considered one chemical on this list)	76-44-8
	1024-57-3
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Hexachlorocyclohexane, gamma- Lindane)	58-89-9
Hexachloroethane	67-72-1
Methoxychlor	72-43-5
Naphthalene	91-20-3
Pendimethalin	40487-42-1
Pentachlorobenzene	608-93-5
Pentachloronitrobenzene (Quintozene)	82-68-8
Pentachlorophenol	87-86-5
Phenanthrene	85-01-8
Polycyclic Aromatic Compounds (PACs) / PAH Group (as defined in TRI)	
PCBs	1336-36-3
Pyrene	129-00-0
Trifluralin	1582-09-8

Metals and Metal Compounds	CAS Number
Cadmium	7440-43-9
Lead	7439-92-1
Mercury	7439-97-6

Where to Find Appropriate Products

These websites will assist MCAS Miramar in finding EPP products:

- **EPA Priority Chemicals list:**
 Provides a list of all 31 PCs plus fact sheets that include potential health effects of each chemical. There is also a tool used to retrieve and manipulate data on PCs reported to the Toxics Release Inventory (TRI) by industrial facilities.
www.epa.gov/osw/hazard/wastemin/priority.htm
- **EPA Database of Environmental Information for Products and Services:**
 The database includes information on products that avoid the EPA PCs.
yosemite1.epa.gov/oppt/epstand2.nsf
- **Agency for Toxic Substances and Disease Registry (ATSDR):**
 The ATSDR is a Federal public health agency of the U.S. Department of Health and Human Services that provides health information to prevent harmful exposures and diseases related to toxic substances. The ATSDR ToxFAQs is a series of summaries about hazardous substances, and includes fact sheets on PCs. Answers are provided to the most frequently asked questions about exposure to hazardous substances sites and the effects of exposure on human health.
<http://www.atsdr.cdc.gov/toxfaq.html>
- **OFEE:**
 Provides information on the 31 Priority Chemicals.
ofee.gov/gp/pchemical.asp
- **EPAs Resource Conservation Challenge (RCC):**
 The Resource Conservation Challenge (RCC) is a national effort to conserve natural resources and energy by managing materials more efficiently. The goals of the RCC are to:

 - Prevent pollution and promote reuse and recycling;
 - Reduce priority and toxic chemicals in products and waste; and
 - Conserve energy and materials.
- EPA identified four national priorities or focus areas for the RCC:

 - **Municipal Solid Waste**
 EPA has issued a nationwide challenge for consumers, businesses, organizations, and industries to recycle 35 percent of America's municipal solid waste—commonly known as trash or garbage. Waste is a part of everyone's daily life, from office paper to product packaging. By managing materials and making smart decisions, we can all make an impact.

- **Green Initiatives-Electronics**

The quantity of computers, televisions, and other electronic products that we purchase, use, and discard is steadily increasing. EPA is collaborating through national partnerships to address the full life cycle of electronics products, including design, operation, reuse, recycling, and disposal. Do your part by recycling televisions, computers, cell phones, and other electronics through EPA programs such as Plug-In to eCycling.

- **Industrial Materials Recycling**

Management and recycling of industrial products and materials are key priority areas. While typically not seen by the general public or part of most of our daily lives, these wastes are often generated in large volumes. Learn about EPA initiatives, such as the Coal Combustion Partnership Program, and the recycling and beneficial use of industrial byproducts generated during manufacturing processes.

- **Priority and Toxic Chemicals Reduction**

While comparatively low in volume, priority and toxic chemicals present potentially hazardous waste. Learn about ways to reduce the amount of hazardous chemicals in products and waste, and make smart upfront decisions with recycling in mind. EPA is working to eliminate or reduce PCs in commercial products, waste streams, and industrial releases through programs like the National Partnership for Environmental Priorities and the Schools Chemical Cleanout Campaign.

Appendix C

Green Procurement Handouts

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Green Procurement Requirements Reference Sheet (Part 1)

Select Sources of Supply for Environmentally Preferable Products and Services

- GSA: www.gsa.gov/environ
- DLA: www.dscr.dla.mil/catalogs/catalog.htm
- Energy Star®: www.energystar.gov/ (note: Energy Star® does not sell products, but provides a list of manufacturers and their certified products)
- AbilityOne: www.jwodcatalog.com/index.aspx
- UNICOR: www.unicor.gov/404error.cfm
- FEMP: http://oahu.lbl.gov/cgi-bin/search_data.pl

Determining EPP Attributes for Specific Purchase Types

- For paints, carpet, office supplies, cleaners and particle board purchases: www.epa.gov/opptintr/epp/index.htm
- For construction projects: www.epa.gov/opptintr/epp/pubs/products/construction.htm

GPP Compliant Product Listings

- CPG: www.epa.gov/cpg/products.htm (the next page for the 2004 list of recycled-content products)
- Biobased: www.biopreferred.gov/Default.aspx?SMSESSION=NO
- FEMP: oahu.lbl.gov
- Energy Star®: www.energystar.gov/index.cfm?fuseaction=find_a_product.
- Alternatives to ODS: www.epa.gov/ozone/snap/lists/index.html

Resources for EPP Product Selection

- EPA Database of Environmentally Preferable Products and Services: yosemite1.epa.gov/oppt/eppstand2.nsf

Green Procurement Requirements Reference Sheet (Part 2)

Table C-1 below is provided as a quick reference for the EPA-designated CPG items. Green procurement requirements mandate that GPC holders purchase products that meet EPA recycled-content requirements for all purchases of the items listed. GPC holders record these purchases on the “GPC Purchasing Considerations and Guidelines Log.”

For questions regarding whether products count as “U.S. EPA-designated” or what the required recycled content for the item is, refer to the EPA CPG’s located in Appendix D, or at www.epa.gov/cpg/products.htm.

Table C-1. EPA-designated CPG Items

Construction Products	
Designated:	
Building Insulation Products	
Carpet (Polyester)	
Carpet Cushion	
Cement and Concrete Containing:	
- Coal fly ash	
- Ground granulated blast furnace slag	
- Cenospheres	
- Silica fume	
Consolidated and Reprocessed Latex Paint	
Floor Tiles	
Flowable Fill	
Laminated Paperboard	
Modular Threshold Ramps	
Non-pressure Pipe	
Patio Blocks	
Railroad Grade Crossing Surfaces	
Roofing Materials	
Shower and Restroom Dividers and Partitions	
Structural Fiberboard	

Landscape Products	
Designated:	
Compost Made From Recovered Organic Materials	
Fertilizer Made From Recovered Organic Materials	
Garden and Soaker Hoses	
Hydraulic Mulch	
Lawn and Garden Edging	
Plastic Lumber Landscaping Timbers and Posts	

Non-paper Office Products

Designated:
Binders, clipboards, file folders, clip portfolios, and presentation folders
Office Furniture
Office Recycling Containers
Office Waste Receptacles
Plastic Desktop Accessories
Plastic Envelopes
Plastic Trash Bags
Printer Ribbons
Toner Cartridges

Paper and Paper Products

Designated:
Commercial/industrial sanitary tissue products
Miscellaneous papers
Newsprint
Paperboard and packaging products
Printing and writing papers

Park and Recreation Products

Designated:
Park Benches and Picnic Tables
Plastic Fencing
Playground Equipment
Playground Surfaces
Running Tracks

Transportation Products

Designated:
Channelizers
Delineators
Flexible Delineators
Parking Stops
Traffic Barricades
Traffic Cones

Vehicular Products

Designated:
Engine Coolants
Rebuilt Vehicular Parts
Re-refined Lubricating Oils
Retread Tires

Miscellaneous Products

Designated:
Awards and Plaques
Bike Racks
Blasting Grit
Industrial Drums
Manual-grade Strapping
Mats
Pallets
Signage
Sorbents

Defense Logistics Agency

DoD EMALL Environmental Attribute Codes (ENAC) DoD 4100-39M, Vol. 10

Recycled Content Products

Products that have recycled content and meet or exceed the specific product Comprehensive Procurement Guidelines – Recovered Materials Advisory Notices (RMAN) as outlined on the EPA website (www.epa.gov/waste/consERVE/tools/cpg/index.htm).

Construction Products

- EF Building Insulation Products
- EH Cement and Concrete containing Coal Fly Ash
- EJ Cement and Concrete containing Ground Granulated Blast-furnace Slag (GGBF)
- EK Structural Fiberboard
- EL Laminated Paperboard
- EM Carpet
- EN Floor Tiles
- EP Patio Blocks
- EQ Latex Paint, Consolidated and Reprocessed
- FD Shower and Restroom Dividers/Partitions
- GT Carpet Cushion
- G1 Cement and Concrete containing Cenospheres
- G2 Cement and Concrete containing Silica Fume

Landscaping Products

- FA Garden and Soaker Hoses
- FB Lawn and Garden Edging
- GU Plastic Lumber Landscaping Timber and Posts

Miscellaneous Products

- GW Awards and Plaques
- GX Industrial Drums
- GY Mats
- GZ Signage
- HA Sorbents
- HB Manual-grade Strapping
- E9 Pallets

Non-Paper Office Products

- E1 Office Recycling Containers
- E2 Office Waste Receptacles
- E3 Plastic Desktop Accessories
- E4 Toner Cartridges
- E5 Binders, Clipboards, File Folders, Clip Portfolios, and Presentation Folders
- E6 Printer Ribbons
- E7 Plastic Trash Bags
- E8 Plastic Envelopes

Paper and Paper Products

- JF Commercial/Industrial Sanitary Tissue Products
- JH Miscellaneous Papers
- JJ Newsprint
- JK Paperboard and Packaging Products
- JL Printing and Writing Papers

Park and Recreation Products

- EX Playground Surfaces
- EY Running Tracks
- EZ Plastic Fencing
- GV Park Benches and Picnic Tables
- HC Playground Equipment

Transportation Products

- ER Traffic Barricades
- ES Traffic Cones
- ET Parking Stops
- EU Channelizers
- EV Delineators
- EW Flexible Delineators

Vehicular Products

- EB Re-refined Lubricating Oil
- ED Retread Tires
- EE Engine Coolants
- G4 Rebuilt Vehicular Parts

Energy Efficient

Products that meet DoE/FEMP specified Energy Efficient product standards or are DoE/FEMP Energy Star® label listed.

Commercial Appliances

- GC Ice Machines
- HN Family-sized Clothes Washers
- JM Gas Griddles
- JN Gas Fryers
- JP Hot Food Holding Cabinets
- JQ Refrigerators and Freezers

Commercial HVAC Equipment

- GL Commercial Unitary Air Conditioners
- GM Commercial Heat Pumps
- HF Boilers
- JS Air-cooled Chillers
- JT Ground-source Heat Pumps
- JU Water-cooled Chillers

Industrial Technologies

GH Electric Motors
GJ Distribution Transformers (Medium)
HH Centrifugal Pumping Systems

Construction Products

GG Windows, Residential
GP Roof Products

Lighting Technologies

GD Exit Signs
GE Fluorescent Tube Lamps
GF Fluorescent Ballasts
GN Fluorescent Luminaries
HJ Industrial High Intensity Discharge Luminaries
HK Down-light Luminaries
HL Compact Fluorescent Lamps
HM Lighting Controls

Office Technologies

FW Computers
FX Monitors
FY Printers
FZ Copiers
GA Facsimile Machines

Residential Appliances

FG Room Air Conditioners
FH Dishwashers
FJ Refrigerators
GK Clothes Washers
G6 Freezers

Residential HVAC Equipment

FK Central Air Conditioners
FM Electric Water Heaters
FN Gas Water Heaters
FP Air-source Heat Pumps
HG Gas Furnaces
JV Ground-source Heat Pumps

Water Conserving

DoE Water Conserving Products, Plumbing fixtures that meet or exceed the DoE/FEMP's recommended performance standards for flow rates and are in the upper 25% of energy efficiency of that product group.

Water Saving Technologies

FR	Faucets
FS	Showerheads
FV	Urinals

Low Standby Power

Products that meet DoE/FEMP specified Low Standby Power product standards, or are DoE/FEMP Energy Star listed.

Audio Products

H1	Audio Products
F1	DVD Players
HX	Television
HY	Video Cassette Recorders
HZ	TV/VCR/DVD Combinations

Computer and Office Devices

G3	Integrated Computers
HR	Desktop Computers
HS	Laptop Computers
HT	Computer Monitors
HU	Printers
HV	Facsimile Machines
HW	Copiers
JW	Computer Workstations
JX	Docking Stations
JY	Multifunction Devices
JZ	Scanners
F9	Microwave Ovens

Biobased Products

Biobased products are products determined by the United States Secretary of Agriculture to be commercial or industrial goods (other than food or feed) composed in whole or in significant part of biological products, forestry materials, or renewal domestic agricultural materials, including plant, animal, or marine materials.

KQ	Mobile Equipment Hydraulic Fluids
KR	Penetrating Lubricants
KS	Diesel Fuel Additives
KT	Roof Coatings
KU	Bedding, Bed Linens, and Towels
KV	Water Tank Coatings
LC	Cutlery

Multiple Entry

- ZZ Will be machine generated output on the transaction when the NSN contains more than three ENACs. All ENACs will be listed in Segment A. Review characteristics data for more information.
- XX Reviewed – Does not meet some ENAC criteria

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Appendix D

EPA Comprehensive Procurement Guidelines and WaterSense Standard Products

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2007 CPG

COMPREHENSIVE
PROCUREMENT
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CONSTRUCTION



Buying recycled products...

- ...conserves natural resources
- ...saves energy
- ...reduces solid waste
- ...reduces air and water pollutants
- ...reduces greenhouse gases
- ...creates new jobs



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Buy-Recycled Series

CONSTRUCTION PRODUCTS

Construction project managers across America are learning that recycled-content construction products are cost-effective, reliable, easy to obtain, and environmentally friendly. Whether you are erecting a new building or constructing a new highway, high-quality recycled-content products can help you get your project off to a great start!

To make it easier to buy recycled, the U.S. Environmental Protection Agency (EPA) periodically updates the Comprehensive Procurement Guidelines (CPG). Through the CPG, EPA designates items that must contain recycled materials when purchased with appropriated federal funds by federal, state, and local agencies, or by government contractors. Several construction products are among these items. EPA's research shows that the items designated in the CPG are of high quality, widely available, and cost-competitive with virgin products. EPA also issues

nonregulatory companion guidance—the Recovered Materials Advisory Notice (RMAN)—that recommends levels of recycled content for these items.

Why Buy Recycled?

Recycling is more than just dropping off your cans, bottles, and newspapers at the curb or at a local collection facility. Diverting recyclables from the waste stream is only the first of three steps in the recycling process. The second step occurs when companies use these recyclables to manufacture new products. The third step comes when you purchase products made from recovered materials.

Buying recycled products results in many environmental benefits. It supports local recycling programs by creating markets for the collected materials that are processed and used to manufacture new products. This creates jobs and helps strengthen the economy; conserves natural resources; saves energy; and reduces solid waste, air and water pollutants, and greenhouse gases that contribute to global warming.

What Is CPG?

The Resource Conservation and Recovery Act (RCRA) requires procuring agencies to buy recycled-content products designated by EPA in the CPG. Issued in May 1995, the first CPG designated 19 new products (including carpet, floor tiles, and laminated paperboard) and incorporated five previously designated items (including building insulation and cement and concrete) in eight product categories. The first CPG update (CPG II) was published in November 1997 and designated an additional 12 items, including shower and restroom dividers/partitions and reprocessed and consolidated latex paint. A second CPG update (CPG III) was published in January 2000 and designated an additional 18 items, including carpet cushion, flowable fill, and railroad grade crossing surfaces. The third CPG update (CPG IV), published in April 2004, designated seven new products, including modular threshold ramps, nonpressure pipe, and roofing materials. It also revised the designation for three items, including cement and concrete, polyester carpet, and railroad grade crossing surfaces. The fourth CPG update (CPG V), published in September 2007, designated one new item and revised another designation, but did not designate any new construction products. For more information, visit <www.epa.gov/epaoswer/non-hw/procure/about.htm>.

Procuring agencies include all federal agencies, and any state or local government agencies or government contractors that use appropriated federal funds to purchase the designated items. If your agency spends more than \$10,000 per year on a product designated in the CPG, you are required to purchase it with the highest recycled-content level practicable. The CPG also applies to lease contracts covering designated items. Executive Order (E.O.) 13423 and the Federal Acquisition Regulation also call for

an increase in the federal government's use of recycled-content and environmentally preferable products.

Once any new items are designated in a published CPG update, an agency has 1 year to develop an affirmative procurement program (or revise an existing one) to include these new items. In previous years, agencies have had to revise their affirmative procurement programs to incorporate buy-recycled requirements for items such as construction board, thermal insulation, floor tiles, carpet, shower and restroom dividers/partitions, reprocessed and consolidated paint, carpet cushion, flowable fill, and railroad grade crossing surfaces. Agencies must have revised their affirmative procurement programs to include the new items designated under CPG IV by April 30, 2005. This effort might have involved reviewing specifications for these products and eliminating provisions that pose barriers to purchasing them with recycled content (such as aesthetic requirements unrelated to product performance). Since CPG V designates no new construction products, agencies are not required to revise this portion of their affirmative procurement program.

The CPG acknowledges that specific circumstances might arise that preclude the purchase of products made with recovered materials. Your agency may purchase designated items that do not contain recovered materials if it determines that: 1) the price of a given designated item made with recovered materials is unreasonably high; 2) there is inadequate competition (not enough sources of supply); 3) unusual and unreasonable delays would result from obtaining the item; or 4) the recycled-content item does not meet the agency's reasonable performance specifications.

Key Terms

Before purchasing construction products containing recovered materials, you might need to review certain key terms:

- **Cenospheres:** Additives similar to coal fly ash and ground granulated blast furnace (GGBF)slag. Cenospheres occur naturally in fly ash, the largest byproduct of coal-fired power plants. They are microscopic spheres made of silica and alumina and are filled with air or other gases.
- **Coal fly ash:** A byproduct of coal burning at electric utility plants. It is called “fly” ash because it is transported from the combustion chamber by exhaust gases.
- **Consolidated paint:** Post-consumer latex paint with similar characteristics (such as type, color family, and finish) that is consolidated at the point of collection. The post-consumer paints are blended together and repackaged, usually with few or no new ingredients added to improve the performance of the resulting paint.
- **Flowable fill:** A wet, flowable slurry made up of coal fly ash, water, a coarse aggregate (such as foundry sand), and a portland cement that is used as an economical fill or backfill material. It can take the place of concrete, compacted soils, or sand commonly used to fill around pipes or void areas.
- **Foundry sand:** Clean, high-quality silica sand or lake sand from both ferrous and nonferrous metal castings.
- **GGBF slag:** A byproduct of iron blast furnaces. The slag is ground into granules finer than portland cement and can be used as an ingredient in concrete.
- **Laminated paperboard:** Boards made from one or more plies of kraft paper bonded together and used for decorative, structural, or insulating purpose.
- **Modular threshold ramps:** Devices used to modify door thresholds and other small rises, particularly with regard to improving access for people with disabilities. Threshold ramps can be made of recovered steel, aluminum, or rubber.
- **Nonpressure pipe:** Pipe used for drainage and as conduit in construction, communications, municipal, industrial, agricultural, and mining applications. Most nonpressure pipe is made with polyvinyl chloride (PVC) and high-density polyethylene (HDPE).
- **Reprocessed paint:** Post-consumer latex paint that has been sorted by a variety of characteristics that are dictated by the recycler. In general, the paint is sorted by type (i.e., interior versus exterior), by light and dark colors, and by finish (i.e., high-gloss versus flat). The reprocessor adds raw materials to meet the performance and color requirements expected or required by the end user.
- **Rock wool:** A composition of fibers manufactured from slag or natural rock and used in building insulation.
- **Silica fume:** A waste material recovered from alloyed metal production. It is the solid waste collected on filters of electric arc furnace stacks. A grain of sand is about 1,000 times larger than a silica fume particle.
- **Structural fiberboard:** Panel made from wood, cane, or paper fibers matted together and used for sheathing, structural, and insulating purposes.

How Do I Purchase Recycled-Content Construction Products?

EPA issues purchasing guidance in RMANs, which are designed to make it as easy as possible to buy the designated items. The RMANs recommend recycled-content levels to look for when purchasing construction products, as shown in the table below. Following the RMANs' recommended levels will help ensure your affirmative procurement program and standards meet the buy-recycled requirements. The RMANs also provide other purchasing guidance. Please refer to <www.epa.gov/cpg/products.htm> for more information on individual products.

Rather than specifying just one level of recycled content, the RMANs recommend ranges that reflect actual market conditions. The recommendations are based on market research identifying recycled-content products that are commercially available, competitively priced, and meet buyers' quality standards.

Access EPA's online recycled-content products database by going to <www.epa.gov/cpg> and selecting "Supplier Database." See the last section of this resource guide for other helpful resources.

EPA's Recommended Content Levels for Construction Products

CONSTRUCTION PRODUCT	MATERIAL RECOVERED	POST-CONSUMER RECOVERED CONTENT	TOTAL RECOVERED CONTENT
Rock Wool Insulation ¹	Slag	—	75%
Fiberglass Insulation ¹	Glass Cullet	—	20–25%
Cellulose Insulation (loose-fill and spray-on) ¹	Post-consumer Paper	75%	75%
Perlite Composite Board Insulation ¹	Post-consumer Paper	23%	23%
Plastic, Non-woven Batt Insulation ¹	Recovered and/or Post-consumer Plastics	—	100%
Plastic Rigid Foam, Polyisocyanurate/ Polyurethane: Rigid Foam Insulation ¹	Recovered Material	—	9%
Foam-in-Place Insulation ¹	Recovered Material	—	5%
Glass Fiber Reinforced Insulation ¹	Recovered Material	—	6%
Phenolic Rigid Foam Insulation ¹	Recovered Material	—	5%
Structural Fiberboard ¹	Recovered Material	—	80–100%
Laminated Paperboard ¹	Post-consumer Paper	100%	100%

MCAS Miramar Final Green Procurement Program Plan

CONSTRUCTION PRODUCT	MATERIAL RECOVERED	POST-CONSUMER RECOVERED CONTENT	TOTAL RECOVERED CONTENT
Cement and Concrete ²	Coal Fly Ash GGBF Slag Cenospheres	See Endnote 2 See Endnote 2	See Endnote 2 See Endnote 2
	Silica Fume		Minimum of 10% (by volume) 5-10% of cementitious material (dry weight basis)
Polyester Carpet Face Fiber ^{1,3}	Polyethylene Terephthalate Resin	25-100%	25-100%
Patio Blocks ¹	Rubber or Rubber Blends	90-100%	—
	Plastic or Plastic Blends	—	90-100%
Floor Tiles (Heavy Duty/ Commercial Use) ¹	Rubber	90-100%	—
	Plastic	—	90-100
Shower and Restroom Dividers/Partitions ¹	Plastic	20-100%	20-100%
	Steel	16% 67%	25-30% 100%
Latex Paint: ¹ – Consolidated ⁵ – Reprocessed ⁶ – White, Off-White, Pastel Colors – Grey, Brown, Earthtones, and Other Dark Colors	Recovered Material	100%	100%
	Recovered Material	20%	20%
	Recovered Material	50-99%	50-99%
Carpet Cushion: ¹ – Bonded Polyurethane – Jute – Synthetic Fibers – Rubber	Old Carpet Cushion	15-50%	15-50%
	Burlap	40%	40%
	Carpet Fabrication Scrap	—	100%
	Tire Rubber	60-90%	60-90%
Flowable Fill Containing Coal Fly Ash and/or Ferrous Foundry Sands ⁷	Coal Fly Ash	See Endnote 7	See Endnote 7
	Ferrous Foundry Sands		

MCAS Miramar Final Green Procurement Program Plan

CONSTRUCTION PRODUCT	MATERIAL RECOVERED	POST-CONSUMER RECOVERED CONTENT	TOTAL RECOVERED CONTENT
Railroad Grade Crossing Surfaces: – Concrete – Rubber – Steel ⁴ – Wood ¹⁰ – Plastic ¹¹	Coal Fly Ash ⁸	—	15–20%
	Tire Rubber	—	85–95%
	Steel ⁴	16% 67%	25–30% 100%
	Wood or Wood Composite	90–97%	90–97%
	Plastic or Plastic Composite	85–95%	100%
Modular Threshold Ramps	Steel ¹²	16–67%	25–100%
	Aluminum	—	10%
	Rubber	100%	100%
Nonpressure Pipe	Steel ⁴	16% 67%	25–30% 100%
	Plastic – HDPE – PVC	100% 5–15%	100% 25–100%
	Cement	See Endnote 2	See Endnote 2
Roofing Materials	Steel ⁴	16% 67%	25–30% 100%
	Aluminum	20–95%	20–95%
	Fiber (felt) or Fiber Composite	50–100%	50–100%
	Rubber	12–100%	100%
	Plastic or Plastic/ Rubber Composite	100%	100%
	Wood/Plastic Composite	—	100%
	Cement	See Endnote 2	See Endnote 2

- ¹ EPA's recommendations do not preclude procuring agencies from purchasing construction products manufactured using other materials. EPA simply recommends that procuring agencies, when purchasing construction products designated in the procurement guidelines, purchase these products containing recovered materials.
- ² EPA recommends that procuring agencies prepare or revise their procurement programs for cement and concrete for construction projects involving cement and concrete to allow the use of coal fly ash, GGBF slag, cenospheres, or silica fume, as appropriate. EPA does not recommend that procuring agencies favor one recovered material over the other. Rather, EPA recommends that procuring agencies consider the use of all of these recovered materials and choose the one (or the mixture of them) that meets their performance requirements, consistent with availability and price considerations. EPA also recommends that procuring agencies specifically include provisions in all construction contracts to allow for the use, as optional or alternate materials, of cement or concrete which contains coal fly ash, GGBF slag, cenospheres, or silica fume, where appropriate. Due to variations in cement, strength requirements, costs, and construction practices, EPA is not recommending recovered materials content levels for cement or concrete containing coal fly ash, GGBF slag, cenospheres, or silica fume. Additional information can be found in the RMAN at <www.epa.gov/cpg/pdf/rmanal4.pdf>.
- ³ EPA recommends that procuring agencies establish minimum content standards for use in purchasing polyester carpet for moderate-wear applications. This recommendation does not include polyester carpet for use in heavy- or severe-wear applications.
- ⁴ The recommended recovered materials content level for steel in this table reflects the fact that the designated items can be made from steel manufactured from either a Basic Oxygen Furnace (BOF) or an Electric Arc Furnace (EAF). Steel from the BOF process contains 25–30 percent total recovered materials, of which 16 percent is post-consumer steel. Steel from the EAF process contains a total of 100 percent recovered steel, of which 67 percent is post-consumer.
- ⁵ Consolidated latex paint used for covering graffiti, where color and consistency of performance are not primary concerns.
- ⁶ Reprocessed latex paint used for interior and exterior architectural applications such as wallboard, ceilings, and trim, gutterboards, and concrete, stucco, masonry, wood, and metal surfaces.
- ⁷ EPA recommends that procuring agencies use flowable fill containing coal fly ash and/or ferrous foundry sands for backfill and other fill applications. EPA further recommends that procuring agencies include provisions in all construction contracts involving backfill or other fill applications to allow for the use of flowable fill containing coal fly ash and/or ferrous foundry sands, where appropriate. The specific percentage of coal fly ash or ferrous foundry sands used in flowable fill depends on the specifics of the job, including the type of coal fly ash used (Class C or Class F), the strength, set time, and flowability needed, and bleeding and shrinkage. Therefore, EPA is not recommending specific coal fly ash or ferrous foundry sands content levels for procuring agencies to use in establishing minimum content standards for flowable fill. However, additional information regarding typical proportions used in flowable fills, as well as specifications and recommended test methods, are provided by EPA and can be found in the Consolidated RMAN for the CPG. An electronic version of this document can be viewed at <www.epa.gov/cpg/pdf/rmanal4.pdf>.
- ⁸ Coal fly ash can be used as an ingredient of concrete slabs, pavements, or controlled density fill product, depending on the type of concrete crossing system installed. Higher percentages of coal fly ash can be used in the concrete mixture, the higher percentages help to produce a more workable and durable product but can prolong the curing process.
- ⁹ The recommended recovered materials content levels for rubber railroad grade crossing surfaces are based on the weight of the raw materials, exclusive of any additives such as binders.
- ¹⁰ Railroad grade crossing surfaces made from recovered wood also may contain other recovered materials such as plastics. The percentages of these materials contained in the product also would count toward the recovered materials content level of the item.
- ¹¹ Railroad grade crossing surfaces made from recovered plastics also may contain other recovered materials such as auto shredder residue, which contains a mix of materials. The percentages of these materials contained in the product also would count toward the recovered materials content level of the item.
- ¹² The recommended recovered materials content levels for steel in this table reflect the fact that the designated item may contain steel manufactured in either a BOF or an EAF or a combination of both. Steel from the BOF process contains 25–30 percent total recovered steel, of which 16 percent is post-consumer. Steel from the EAF process contains 100 percent total recovered steel, of which 67 percent is post-consumer. According to industry sources, modular threshold ramps containing a combination of BOF and EAF steel would contain 25–85 percent total recovered steel, of which 16–67 percent would be post-consumer. Since there is no way of knowing which type of steel was used in the manufacture of the item, the post-consumer and total recovered material content ranges in this table encompass the whole range of possibilities, i.e., the use of EAF steel only, BOF steel only, or a combination of the two.

2007 CPG

COMPREHENSIVE
PROCUREMENT
GUIDELINES

Buy-Recycled Series

LANDSCAPING PRODUCTS

It might be easier than you think to turn garbage into gardens! Whether you are a park manager, professional landscaper, or tend a small garden bed, you will find recycled-content products offer a quick, effective, and affordable way to make your grounds green.

Notice (RMAN)—that recommends levels of recycled content for these items.

Why Buy Recycled?

Recycling is more than just dropping off your cans, bottles, and newspapers at the curb or at a local collection facility. Diverting recyclables from the waste stream is only the first of three steps in the recycling process. The second step occurs when companies use these recyclables to manufacture new products. The third step comes when you purchase products made from recovered materials.

Buying recycled products results in many environmental benefits. It supports local recycling programs by creating markets for the collected materials that are processed and used to manufacture new products. This creates jobs and helps strengthen the economy; conserves natural resources; saves energy; and reduces solid waste, air and water pollutants, and greenhouse gases that contribute to global warming.

To make it easier to buy recycled, the U.S. Environmental Protection Agency (EPA) periodically updates the Comprehensive Procurement Guidelines (CPG). Through the CPG, EPA designates items that must contain recycled materials when purchased with appropriated federal funds by federal, state, and local agencies, or by government contractors. Several landscaping products are among these items. EPA's research shows that the items designated in the CPG are of high quality, widely available, and cost-competitive with virgin products. EPA also issues nonregulatory companion guidance—the Recovered Materials Advisory

LANDSCAPING



Buying recycled products...

- ...conserves natural resources
- ...saves energy
- ...reduces solid waste
- ...reduces air and water pollutants
- ...reduces greenhouse gases
- ...creates new jobs



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www.epa.gov/osw
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What Is CPG?

The Resource Conservation and Recovery Act (RCRA) requires procuring agencies to buy recycled-content products designated by EPA in the CPG. Issued in May 1995, the first CPG designated 19 new products (including hydraulic mulch) and incorporated five previously designated items in eight product categories. The first CPG update (CPG II) was published in November 1997 and designated an additional 12 items, including garden and soaker hoses, as well as lawn and garden edging. A second CPG update (CPG III) was published in January 2000 and designated an additional 18 items, including food waste compost and plastic lumber landscaping timbers and posts. The third CPG update (CPG IV), published in April 2004, designated seven new products but no additional landscaping products. Most recently, a fourth CPG update (CPG V), published in September 2007, revised the compost designation and added fertilizer made from recovered organic materials to the landscaping products category. For more information, visit www.epa.gov/epaoswer/non-hw/procure/about.htm.

Procuring agencies include all federal agencies, and any state or local government agencies or government contractors that use appropriated federal funds to purchase the designated items. If your agency spends more than \$10,000 per year on a product designated in the CPG, you are required to purchase it with the highest recycled-content level practicable. The CPG also applies

to lease contracts covering designated items. Executive Order (E.O.) 13423 and the Federal Acquisition Regulation also call for an increase in the federal government's use of recycled-content and environmentally preferable products.

Once any new items are designated in a published CPG update, an agency has 1 year to develop an affirmative procurement program (or revise an existing one) to include these new items. In previous years, agencies have had to revise their affirmative procurement programs to incorporate items such as hydraulic mulch, compost, garden and soaker hoses, lawn and garden edging, and plastic lumber landscaping timbers and posts. Because CPG V designated new landscaping products, agencies are required to revise the landscaping portion of their affirmative procurement program by September 14, 2008.

The CPG acknowledges that specific circumstances might arise that preclude the purchase of products made with recovered materials. Your agency may purchase designated items that do not contain recovered materials if it determines that: 1) the price of a given designated item made with recovered materials is unreasonably high; 2) there is inadequate competition (not enough sources of supply); 3) unusual and unreasonable delays would result from obtaining the item; or 4) the recycled-content item does not meet the agency's reasonable performance specifications.



How Do I Purchase Recycled-Content Landscaping Products?

The EPA issues purchasing guidance in RMANs, which are designed to make it as easy as possible to buy the designated items. The RMANs recommend recycled-content levels to look for when purchasing landscaping products, as shown in the chart below. Following the RMANs' recommended levels will help ensure your affirmative procurement program and standards meet the buy-recycled requirements. The RMANs also provide other purchasing guidance. Please refer to <www.epa.gov/cpg/products.htm> for more information on individual products.

Rather than specifying just one level of recycled content, the RMANs recommend ranges that reflect actual market conditions. The recommendations are based on market research identifying recycled-content products that are commercially available, are competitively priced, and meet buyers' quality standards.

Access EPA's online recycled-content products database by going to <www.epa.gov/cpg> and selecting "Supplier Database." See the last section of this resource guide for other helpful resources.

EPA's Recommended Content Levels for Landscaping Products

LANDSCAPING PRODUCT	MATERIAL RECOVERED	POST-CONSUMER RECOVERED CONTENT	TOTAL RECOVERED CONTENT
Hydraulic Mulch	Paper	100%	—
	Wood/Paper	—	100%
Compost Made from Recovered Organic Materials	Food Waste, Yard Trimmings, Manure, Biosolids, and Other Recovered Organic Materials	See Endnote 2	See Endnote 2
Fertilizer Made from Recovered Organic Materials	Alfalfa Meal, Blood Meal, Cottonseed Meal, Feather Meal, Fish Meal, Meat and Bone Meal, Poultry Manure/Litter, Soybean Meal, Wood Ash, and Other Recovered Organic Materials	See Endnote 2	See Endnote 2
Garden Hose	Rubber and/or Plastic	60–65%	—
Soaker Hose	Rubber and/or Plastic	60–70%	—
Lawn and Garden Edging	Rubber and/or Plastic	30–100%	30–100%
Landscaping Timbers and Posts	High-density Polyethylene (HDPE)	25–50%	75–100%
	Mixed Plastic/Sawdust	50%	100%
	HDPE/Fiberglass	75%	95%
	Other Mixed Resins	50–100%	95–100%

¹ EPA's recommendations do not preclude procuring agencies from purchasing landscaping products manufactured using other materials. EPA simply recommends that procuring agencies, when purchasing landscaping products designated in the procurement guidelines, purchase these products containing recovered materials.

² EPA is not recommending any content ranges for either compost or fertilizer since both are generally made exclusively from recovered materials. EPA recommends that procuring agencies purchase or use mature compost made from recovered organic materials in such applications as landscaping, seeding of grass or other plants on roadsides and embankments, as nutritious mulch under trees and shrubs, and in erosion control and soil reclamation. EPA further recommends implementing a composting system for these materials when agencies have an adequate volume and sufficient space.

Planting the Seeds: Hydraulic Mulch

You might be establishing wildflowers along an interstate or replanting grass on a public golf course. In either case, your first step is to plant the seeds. Hydraulic mulch is a quick, proven, and affordable way to help get the job done. Utilizing recovered newspaper and wood products, hydraulic mulch is commonly used in highway construction projects to grow grass along embankments, medians, and roadways. It also is used in recreational areas and on residential lawns. Through hydroseeding, a mixture of water, seeds, and hydraulic mulch is sprayed over soil. The mulch stabilizes the soil, prevents wind and water erosion, and provides protection and warmth for the seeds, helping them grow. Be sure you require that contractors use hydraulic mulch for all your hydroseeding projects, where appropriate. Hydraulic mulch not only protects young seeds from the elements, it also strengthens demand for wood waste and the newspaper you recycle in your local recycling program.

Strengthening the Soil: Compost and Fertilizer Made from Recovered Organic Materials

Used frequently in both commercial and residential landscaping, compost and fertilizer made from recovered organic materials turn the organic waste we might otherwise throw away—such as grass, leaves, twigs, fruit and vegetable trimmings, biosolids and manure—into an effective soil amendment.

There is a significant overlap in the type of recovered organic materials that can go into compost and fertilizer made from recovered organic materials. Their use is similar in most circumstances. However, to differentiate between the two: fertilizer's intended use is to add certain nutrients into the soil, compost has many additional uses.

Fertilizers typically provide, in varying proportions, the three major plant nutrients (nitrogen, phosphorus, and potassium) and the secondary plant nutrients (calcium, sulfur, magnesium).

Fertilizer changes the chemical state of the soil adjacent to plant roots, and the plants draw the feed—whether applied as a liquid or as a dry fertilizer—into the plant with water needed by the plant.

Compost affects the nutritional potential of the root environment by adding nutrient storage capacity. It attracts beneficial organisms that make fertilizer more available to the plant, and moderates the acidity or alkalinity of the soil. Worked in, it improves the permeability of the soil to water, improves soil granulation and fosters better root growth, and helps to add pore space within the soil structure for better oxygenation and water storage. Additionally, compost can suppress some plant diseases and prevent soil erosion when used as cover for seeded grass.

With an increase in the number of composting facilities from 651 in 1988 to 3,800 in 2000, the market is clearly growing for this valuable product. Even so, more yard trimmings and food waste still could be composted. In 2000, these valuable organic materials constituted more than 23 percent of our national waste stream, with 53.6 million tons generated, of which only about 30 percent of that amount (16.5 million tons) was recovered for composting.

Quenching Mother Nature's Thirst: Garden and Soaker Hoses

Once your seeds are planted and the soil is enhanced with nutrient-rich compost, nothing is more important than adequate watering. The questions of how much and how often to water are a matter of local climactic conditions, but one thing is clear—buying recycled-content garden and soaker hoses is the ideal choice for watering your garden or planted areas. Not only will these hoses deliver water to meet your garden's needs, they also will help create new uses for old tires and recycled plastics from items such as discarded cable wires and old traffic cones.

■ Building a Home for the Garden: Landscaping Timbers and Posts (Plastic Lumber)

To create attractive and effective landscaping, you will need some construction skills as well as a green thumb. Raised beds, for example, will frame and protect flower beds. Framed walkways, bordered lawns, and flower beds all enhance the appearance of a landscape. Likewise, retaining walls can control erosion. Whether you are beautifying a park, highway, housing development, zoo, or the exterior of an office building, you can do it with recycled-content landscaping timbers and posts. The National Park Service is leading the way with more than a dozen projects using timbers and posts manufactured with plastic or composite lumber, which give new life to recovered wood and plastic materials such as milk jugs and plastic bags.

■ The Border Line: Lawn and Garden Edging

When you are ready to finish the job, recycled-content lawn and garden edging provides the perfect barrier for delineating your beds. Sold in both industrial and residential strengths, these quality products help keep grass and weeds out of flower and vegetable beds, saving time and money. You can purchase up to 100 percent post-consumer recycled-content edging, which is made from scrap rubber, milk jugs, and other plastic containers.

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2007 CPG

COMPREHENSIVE PROCUREMENT GUIDELINES

MISCELLANEOUS



Buying recycled products...

- ...conserves natural resources
- ...saves energy
- ...reduces solid waste
- ...reduces air and water pollutants
- ...reduces greenhouse gases
- ...creates new jobs



EPA530-F-07-043
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October 2007

Buy-Recycled Series

MISCELLANEOUS PRODUCTS

More and more procurement officials are realizing that buying recycled is an easy, cost-efficient, and earth-friendly alternative. Today's products made from materials recovered for recycling offer the strength, durability, and performance equivalent to those made from virgin materials. That is why businesses and public sector buyers across the country are buying and using recycled-content products.

To make it easier to buy recycled, the U.S. Environmental Protection Agency (EPA) periodically updates the Comprehensive Procurement Guidelines (CPG). Through the CPG, EPA designates items that must contain recycled materials when purchased with appropriated federal funds by federal, state, and local agencies, or by government contractors. Several miscellaneous products are among these items. These are items that do not correspond to any of the other seven CPG product categories. EPA's research shows that the items designated in the

CPG are of high quality, widely available, and cost-competitive with virgin products. EPA also issues nonregulatory companion guidance—the Recovered Materials Advisory Notice (RMAN)—that recommends levels of recycled content for these items.

Why Buy Recycled?

Recycling is more than just dropping off your cans, bottles, and newspapers at the curb or at a local collection facility. Diverting recyclables from the waste stream is only the first of three steps in the recycling process. The second step occurs when companies use these recyclables to manufacture new products. The third step comes when you purchase products made from recovered materials.

Buying recycled products results in many environmental benefits. It supports local recycling programs by creating markets for the collected materials that are processed and used to manufacture new products. This creates jobs and helps strengthen the economy; conserves natural resources; saves energy; and reduces solid waste, air and water pollutants, and greenhouse gases that contribute to global warming.

What Is CPG?

The Resource Conservation and Recovery Act (RCRA) requires procuring agencies to buy recycled-content products designated by EPA in the CPG. Issued in May 1995, the first CPG designated 19 new products and incorporated five previously designated items in eight product categories. The first CPG update (CPG II) was published in November 1997 and designated an additional 12 items, including pallets. A second CPG update (CPG III) was published in January 2000 and designated an additional 18 items, including sorbents, awards and plaques, industrial drums, mats, manual-grade strapping, and signage. The third CPG update (CPG IV), published in April 2004, designated seven new products, including bike racks and blasting grit. The fourth CPG update (CPG V), published in September 2007, designated one new item and revised another designation, but did not designate any new miscellaneous products. For more information, visit www.epa.gov/epaoswer/non-hw/procure/about.htm.

Procuring agencies include all federal agencies, and any state or local government agencies or government contractors that use appropriated federal funds to purchase the designated items. If your agency spends more than \$10,000 per year on a product designated in the CPG, you are required to purchase it with the highest recycled-content level practicable. The CPG also applies to lease contracts covering designated items. Executive Order (E.O.) 13423 and the Federal Acquisition Regulation also call for

an increase in the federal government's use of recycled-content and environmentally preferable products.

Once any new items are designated in a published CPG update, an agency has 1 year to develop an affirmative procurement program (or revise an existing one) to include these new items. In previous years, agencies have had to revise their affirmative procurement programs to incorporate buy-recycled requirements for items such as pallets, sorbents, awards and plaques, industrial drums, mats, manual-grade strapping, and signage. Agencies must have revised their affirmative procurement programs to include the new items designated in CPG IV by April 30, 2005. This effort might have involved reviewing specifications for these items and eliminating provisions that pose barriers to purchasing them with recycled content (such as aesthetic requirements unrelated to product performance).

The CPG acknowledges that specific circumstances might arise that preclude the purchase of products made with recovered materials. Your agency may purchase designated items that do not contain recovered materials if you determine that: 1) the price of a given designated item made with recovered materials is unreasonably high; 2) there is inadequate competition (not enough sources of supply); 3) unusual and unreasonable delays would result from obtaining the item; or 4) the recycled-content item does not meet the agency's reasonable performance specifications.

How Do I Purchase Recycled-Content Miscellaneous Products?

EPA issues purchasing guidance in RMANs, which are designed to make it as easy as possible to buy the designated items. The RMANs recommend recycled-content levels to look for when purchasing miscellaneous products, as shown in the table below. Following the RMANs' recommended levels will help ensure your affirmative procurement program and standards meet the buy-recycled requirements. The RMANs also provide other purchasing guidance. Please refer to www.epa.gov/cpg/products.htm for more information on individual products.

Rather than specifying just one level of recycled content, the RMANs recommend ranges that reflect actual market conditions. The recommendations are based on market research identifying recycled-content products that are commercially available, are competitively priced, and meet buyers' quality standards.

Access EPA's online recycled-content products database by going to www.epa.gov/cpg and selecting "Supplier Database." See the last section of this resource guide for other helpful resources.

EPA's Recommended Content Levels for Miscellaneous Products

MISCELLANEOUS PRODUCT	MATERIAL RECOVERED	POST-CONSUMER RECOVERED CONTENT	TOTAL RECOVERED CONTENT
Awards and Plaques¹	Glass	75–100%	100%
	Wood	—	100%
	Paper	40–100%	—
	Plastic and Plastic/Wood Composite	50–100%	95–100%
Industrial Drums¹	Steel ²	16%	25–35%
	Plastic High-density Polyethylene (HDPE)	30–100%	—
	Fiber (paper)	100%	—
Mats¹	Rubber	75–100%	85–100%
	Plastic	10–100%	100%
	Rubber/Plastic Composite	100%	—
Pallets¹	Wood	95–100%	—
	Plastic	100%	—
	Thermoformed	25–50%	—
	Paperboard	50%	—

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MISCELLANEOUS PRODUCT	MATERIAL RECOVERED	POST-CONSUMER RECOVERED CONTENT	TOTAL RECOVERED CONTENT
Signage¹	Plastic ³	80–100%	—
	Aluminum	25%	—
	Plastic Sign Posts/Supports ³	80–100%	—
	Steel Sign Posts/Supports ⁴	16% 67%	25–30% 100%
Sorbents¹	Paper	90–100%	100%
	Textiles	95–100%	—
	Plastics	—	25–100%
	Wood ⁵	—	100%
	Other Organics/ Multimaterials ⁶	—	100%
Manual-Grade Strapping¹	Polyester	50–85%	—
	Polypropylene	—	10–40%
	Steel ⁴	16% 67%	25–30% 100%

¹ EPA's recommendations do not preclude procuring agencies from purchasing miscellaneous products manufactured using other materials. EPA simply recommends that procuring agencies, when purchasing miscellaneous products designated in the procurement guidelines, purchase these products containing recovered materials.

² The recommended recovered materials content levels for steel in this table reflect the fact that the designated item is generally made from steel manufactured in a Basic Oxygen Furnace (BOF). Steel from the BOF process contains 25–30 percent total recovered steel, of which 16 percent is post-consumer steel.

³ Plastic signs and sign posts are recommended for nonroad applications only, such as, but not limited to, railway signs in parks and directional/informational signs in buildings.

⁴ The recommended recovered materials content level for steel in this table reflects the fact that the designated items can be made from steel manufactured from either a BOF or an Electric Arc Furnace (EAF). Steel from the BOF process contains 25–30 percent total recovered materials, of which 16 percent is post-consumer steel. Steel from the EAF process contains a total of 100 percent recovered steel, of which 67 percent is post-consumer.

⁵ "Wood" includes materials such as sawdust and lumber mill trimmings.

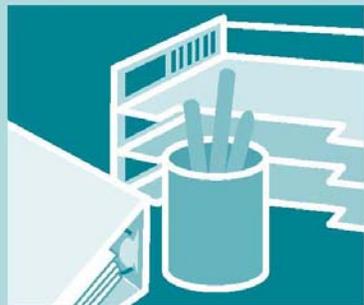
⁶ Examples of other organics include, but are not limited to, peanut hulls and corn stover. An example of multimaterial sorbents would include, but not be limited to, polymer and cellulose fiber combination.

⁷ The recommended recovered materials content levels for steel in this table reflect the fact that the designated item may contain steel manufactured in either a BOF or an EAF, or a combination of both. Steel from the BOF process contains 25–30 percent total recovered steel, of which 16 percent is post-consumer. Steel from the EAF process contains 100 percent total recovered steel, of which 67 percent is post-consumer. According to industry sources, blasting grit containing a combination of BOF and EAF steel would contain 25–85 percent total recovered steel, of which 16–67 percent would be post-consumer. Since there is no way of knowing which type of steel was used in the manufacture of the item, the post-consumer and total recovered material content ranges in this table encompass the whole range of possibilities, i.e., the use of EAF steel only, BOF steel only, or a combination of the two.

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COMPREHENSIVE
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GUIDELINES

NONPAPER OFFICE



Buying recycled products...

- ...conserves natural resources
- ...saves energy
- ...reduces solid waste
- ...reduces air and water pollutants
- ...reduces greenhouse gases
- ...creates new jobs



EPA530-F-07-038
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October 2007

Buy-Recycled Series

NONPAPER OFFICE PRODUCTS

The soda bottle you recycled after lunch might end up back on your desk as a recycled binder or pencil holder. Used toner cartridges and printer ribbons once considered "trash" are now remanufactured and returned, providing your office with high-performance products at considerable savings.

To make it easier to buy recycled, the U.S. Environmental Protection Agency (EPA) periodically updates the Comprehensive Procurement Guidelines (CPG). Through the CPG, EPA designates items that must contain recycled materials when purchased with appropriated federal funds by federal, state, and local agencies, or by government contractors. Several nonpaper office products are among these items. EPA's research shows that the items designated in the CPG are of high quality, widely available, and cost-competitive with

virgin products. EPA also issues nonregulatory companion guidance—the Recovered Materials

Advisory Notice (RMAN)—that recommends levels of recycled content for those items.

Why Buy Recycled?

Recycling is more than just dropping off your cans, bottles, and newspapers at the curb or at a local collection facility. Diverting recyclables from the waste stream is only the first of three steps in the recycling process. The second step occurs when companies use these recyclables to manufacture new products. The third step comes when you purchase products made from recovered materials.

Buying recycled products results in many environmental benefits. It supports local recycling programs by creating markets for the collected materials that are processed and used to manufacture new products. This creates jobs and helps strengthen the economy; conserves natural resources; saves energy; and reduces solid waste, air and water pollutants, and greenhouse gases that contribute to global warming.

What Is CPG?

The Resource Conservation and Recovery Act (RCRA) requires procuring agencies to buy recycled-content products designated by EPA in the CPG. Issued in May 1995, the first CPG designated 19 new products (including binders, office recycling containers, office waste receptacles, plastic desktop accessories, plastic trash bags, and toner cartridges) and incorporated five previously designated items in eight product categories. The first CPG update (CPG II) was published in November 1997 and designated an additional 12 items, including plastic envelopes and printer ribbons. A second CPG update (CPG III) was published in January 2000 and designated an additional 18 items, including plastic binders, plastic clipboards, plastic file folders, plastic clip portfolios, and plastic presentation folders. The third CPG update (CPG IV), published in April 2004, designated seven new products, including office furniture. The fourth CPG update (CPG V), published in September 2007, designated one new item and revised another designation, but did not designate any new nonpaper office products. For more information, visit <www.epa.gov/epaoswer/non-hw/procure/about.htm>.

Procuring agencies include all federal agencies, and any state or local government agencies or government contractors that use appropriated federal funds to purchase the designated items. If your agency spends more than \$10,000 per year on a product designated in the CPG, you are required to purchase it with the highest recycled-content level practicable. The CPG also applies to lease contracts covering designated items. Executive Order (E.O.) 13423 and the Federal Acquisition Regulation also call for an increase in the federal government's use of recycled-content and environmentally preferable products.

Once any new items are designated in a published CPG update, an agency has 1 year to develop an affirmative procurement program (or revise an existing one) to include these new items. In previous years, agencies have had to revise their affirmative procurement programs to incorporate buy-recycled requirements for items such as recycling containers; waste receptacles; plastic desktop accessories; plastic covered, paper covered, and pressboard binders; trash bags; toner cartridges; printer ribbons; plastic envelopes; plastic binders; plastic clipboards; plastic file folders; plastic clip portfolios; and plastic presentation folders. Agencies must have revised their affirmative procurement programs to add the items designated under CPG IV by April 30, 2005. This effort might have involved reviewing specifications for this product and eliminating provisions that pose barriers to procuring it with recycled content (such as aesthetic requirements unrelated to product performance). Also, be aware that paper envelopes were designated in CPG I. Recommended recycled-content ranges for paper envelopes are addressed in the RMAN for paper products and also can be found in the Buy-Recycled Series Paper Products resource guide.

The CPG acknowledges that specific circumstances might arise that preclude the purchase of products made with recovered materials. Your agency may purchase designated items that do not contain recovered materials if it determines that: 1) the price of a given designated item made with recovered materials is unreasonably high; 2) there is inadequate competition (not enough sources of supply); 3) unusual and unreasonable delays would result from obtaining the item; or 4) the recycled-content item does not meet the agency's reasonable performance specifications.

How Do I Purchase Recycled-Content Nonpaper Office Products?

EPA issues purchasing guidance in RMANs, which are designed to make it as easy as possible to buy the designated items. The RMANs recommend recycled-content levels to look for when purchasing office products, as shown in the table below. Following the RMANs' recommended levels will help ensure your affirmative procurement program and standards meet the buy-recycled requirements. The RMANs also provide other purchasing guidance. Please refer to <www.epa.gov/cpg/products.htm> for more information on individual products.

Rather than specifying just one level of recycled content, the RMANs recommend ranges that reflect actual market conditions. The recommendations are based on market research identifying recycled-content products that are commercially available, are competitively priced, and meet buyers' quality standards.

Access EPA's online recycled-content products database by going to <www.epa.gov/cpg> and selecting "Supplier Database." See the last section of this resource guide for other helpful resources.

EPA's Recommended Content Levels for Nonpaper Office Products

NONPAPER OFFICE PRODUCT	MATERIAL RECOVERED	POST-CONSUMER RECOVERED CONTENT	TOTAL RECOVERED CONTENT
Recycling Containers and Waste Receptacles ¹	Plastic	20–100%	—
	Steel ²	16%	25–30%
	Paper		
	– Corrugated	25–50%	25–50%
	– Solid Fiber Boxes	40%	—
	– Industrial Paperboard	40–80%	100%
Desktop Accessories including Desk Organizers, Sorters, Trays, and Memo, Note, and Pencil Holders ¹	Plastic (Polystyrene [PS])	25–80%	—
Binders ¹	Plastic-covered	—	25–50%
	Paper-covered	75–100%	90–100%
	Pressboard	20%	50%
	Solid Plastic		
	– High-density Polyethylene (HDPE)	90%	90%
	– Polyethylene (PE)	30–50%	30–50%
	– Polyethylene Terephthalate (PET)	100%	100%
– Miscellaneous Plastics	80%	80%	

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NONPAPER OFFICE PRODUCT	MATERIAL RECOVERED	POST-CONSUMER RECOVERED CONTENT	TOTAL RECOVERED CONTENT
Trash Bags ¹	Plastic	10–100%	—
Toner Cartridges ^{1,3}	See Endnote 3	See Endnote 3	See Endnote 3
Printer Ribbons ^{1,4}	See Endnote 4	See Endnote 4	See Endnote 4
Plastic Envelopes ¹	Plastic	25%	25–30%
Plastic Clipboards ¹	HDPE	90%	90%
	PS	50%	50%
	Miscellaneous Plastic	15%	15–80%
Plastic File Folders ¹	HDPE	90%	90%
Plastic Clip Portfolios	HDPE	90%	90%
Plastic Presentation Folders ¹	HDPE	90%	90%
Office Furniture	Furniture Structure – Steel ² – Aluminum	16% —	25–30% 75–100%
	Particleboard/Fiberboard Component ⁵ – Wood or Wood Composite – Agricultural Fiber	Greater than 0% —	80–100% 100%
	Fabric – PET	100%	100%
	Plastic Furniture Component – HDPE	70–75%	95%
	Remanufactured or Refurbished Furniture – Various	25–75%	25–75%

¹ EPA's recommendations do not preclude procuring agencies from purchasing nonpaper office products made from the materials manufactured using other materials, such as wood or cloth. EPA simply recommends that procuring agencies, when purchasing nonpaper office products made from the materials designated in the procurement guidelines, purchase these products containing recovered materials.

² The recommended recovered materials content levels for steel in this table reflect the fact that the designated item is generally made from steel manufactured in a Basic Oxygen Furnace (BOF). Steel from the BOF process contains 25–30 percent total recovered materials, of which 16 percent is post-consumer steel.

³ EPA recommends the return of used toner cartridges for remanufacturing and reuse or purchasing a remanufactured or recycled-content replacement cartridge.

⁴ EPA recommends the procurement of printer ribbon reinking or reloading services, or reinked or reloaded printer ribbons.

⁵ Particleboard and fiberboard used in the wood components of office furniture also may contain other recovered cellulosic materials, including paper, wheat straw, and bagasse. The percentages of these materials contained in the product also would count toward the recovered materials content level of the item. In addition, while EPA has no evidence or indication that wood treated with chromated copper arsenate (CCA) is currently used in office furniture, EPA is not recommending the use of CCA-treated wood as a recovered material in office furniture. The arsenic in CCA is a known human carcinogen and EPA is currently conducting a thorough and comprehensive risk assessment of CCA as a part of the pesticide reregistration process for CCA. In addition, EPA is conducting a risk assessment for children who contact CCA treated wood playsets and decks.

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COMPREHENSIVE
PROCUREMENT
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Buy-Recycled Series

PAPER PRODUCTS



PAPER

Buying recycled products...

- ...conserves natural resources
- ...saves energy
- ...reduces solid waste
- ...reduces air and water pollutants
- ...reduces greenhouse gases
- ...creates new jobs



EPA530-F-07-039
www.epa.gov/osw
October 2007

Twenty years ago, very little recycled-content printing and writing paper existed. Now, it is readily available, along with recycled-content newsprint, paper towels, and corrugated packaging—and at higher quality and more competitive prices than ever before. That is in part due to government initiatives since 1988, when the U.S. Environmental Protection Agency (EPA) issued the Procurement Guideline for Paper and Paper Products Containing Recovered Materials. The 1988 paper guideline's buy-recycled requirements are now part of EPA's Comprehensive Procurement Guidelines (CPG).

To make it easier to buy recycled, the EPA periodically updates the CPG. Through the CPG, EPA designates items that must contain recycled materials when purchased with appropriated federal funds by federal, state, and local agencies, or by government contractors. Among these items, EPA has designated five types of paper products made from recovered materials. EPA's research shows

that the items designated in the CPG are of high quality, widely available, and cost-competitive with virgin products. EPA also issues nonregulatory companion guidance—the Recovered Materials Advisory Notice (RMAN)—that recommends levels of recycled content for these items.

Why Buy Recycled?

Recycling is more than just dropping off your cans, bottles, and newspapers at the curb or at a local collection facility. Diverting recyclables from the waste stream is only the first of three steps in the recycling process. The second step occurs when companies use these recyclables to manufacture new products. The third step comes when you purchase products made from recovered materials.

Buying recycled products results in many environmental benefits. It supports local recycling programs by creating markets for the collected materials that are processed and used to manufacture new products. This creates jobs and helps strengthen the economy; conserves natural resources; saves energy; and reduces solid waste, air and water pollutants, and greenhouse gases that contribute to global warming.

What Is CPG?

The Resource Conservation and Recovery Act requires procuring agencies to buy recycled-content products designated by EPA in the CPG. Issued in May 1995, the first CPG designated 19 new products and incorporated five previously designated items (including paper and paper products) in eight product categories. Paper Products RMAN I was published in May 1996. Paper Products RMAN II, which superseded the previous Paper Products RMAN, was published in June 1998. The first CPG update (CPG II) was published in November 1997. The second CPG update (CPG III) was published in January 2000, and the third CPG update (CPG IV) was published in April 2004. The fourth CPG update (CPG V), published in September 2007, designated one new item and revised another designation. No new paper products were designated in any of the updates. For more information, visit www.epa.gov/epaoswer/non-hw/procure/about.htm.

Procuring agencies include all federal agencies, and any state or local government agencies or government contractors that use appropriated federal funds to purchase the designated items. If your agency spends more than \$10,000 per year on a product designated in the CPG, you are required to purchase it with the highest recycled-content level practicable. The CPG also applies to lease contracts covering designated

items. Executive Order (E.O.) 13423 and the Federal Acquisition Regulation also call for an increase in the federal government's use of recycled-content and environmentally preferable products.

Once any new items are designated in a published CPG update, an agency has 1 year to develop an affirmative procurement program (or revise an existing one) to include these new items. By June 22, 1989, agencies were required to develop affirmative procurement programs to incorporate buy-recycled requirements for paper and paper products. Since CPG V designates no new paper products, agencies are not required to revise this portion of their affirmative procurement program.

The CPG acknowledges that specific circumstances might arise that preclude the purchase of products made with recovered materials. Your agency may purchase designated items that do not contain recovered materials if it determines that: 1) the price of a given designated item made with recovered materials is unreasonably high; 2) there is inadequate competition (not enough sources of supply); 3) unusual and unreasonable delays would result from obtaining the item; or 4) the recycled-content item does not meet the agency's reasonable performance specifications.

How Do I Purchase Recycled-Content Paper Products?

The Paper Products RMAN II recommends recycled-content levels that you can look for when purchasing paper products, as shown in the table on page 4. Use EPA's RMAN recommendations as a starting point. The recommendations are based on market research used to identify recycled-content products that are commercially available. The RMANs also provide other purchasing guidance. Please refer to www.epa.gov/cpg/products.htm for more information on individual products.

Rather than specifying just one level of recycled content, the RMAN recommends ranges for many paper products, which reflect what is currently available in the United States. The recycled content of paper products varies; therefore, you should contact local paper mills or merchants to determine product availability. Try to purchase paper containing the highest content that is available to you.

When buying paper other than printing and writing paper, specify that you want paper "containing X percent recovered fiber, including Y percent post-consumer fiber." (For most printing and writing papers, you can simply say you are looking for 30 percent post-consumer content.)

In addition, make sure you measure recovered and post-consumer fiber content as a percentage of the weight of all fiber in the paper, not as a percentage of the total weight of the sheet. (The total weight also includes the weight of dyes, fillers, and water used in the manufacturing process.)

Access EPA's online recycled-content products database by going to www.epa.gov/cpg and selecting "Supplier Database." See the last section of this guide for other helpful resources.

Key Terms

Before buying recycled-content paper products meeting EPA's recommendations, you will need to understand some important terms.

Post-consumer fiber:

- Is the paper recovered in our homes and offices.
- Does not include newsstand returns and printers' overruns.

Recovered fiber:

- Includes scrap generated at mills after the end of the papermaking process; converting and printing scrap; newsstand returns and printers' overruns; obsolete inventory of mills, printers, and others; damaged stock; and post-consumer fiber.
- Is not waste. EPA has replaced the term waste paper used in the 1988 guidelines with recovered fiber, to acknowledge that this material is a valuable resource.
- Must be repulped. Paper cannot simply be re-cut or repackaged to count as recovered-content paper.
- Does not include forest residues such as sawdust and wood chips from forestry operations.

Mill broke:

- Is scrap generated in a mill prior to the completion of the papermaking process.
- EPA recommends that you allow mills to count the recycled-content portion of mill broke. You should not count the nonrecycled-content portion, however.

EPA's Recommended Content Levels for Paper Products

PAPER PRODUCT	NOTES	POST-CONSUMER RECOVERED FIBER	TOTAL RECOVERED FIBER
Printing and Writing Papers			
Reprographic	Business papers such as bond, electrostatic, copy, mimeo, duplicator, and reproduction	30%	30%
Offset	Used for book publishing, commercial printing, direct mail, technical documents, and manuals	30%	30%
Tablet	Office paper such as note pads and notebooks	30%	30%
Forms Bond	Bond type paper used for business forms such as continuous, cash register, sales book, unit sets, and computer printout, excluding carbonless	30%	30%
Envelope	Wove Kraft, white, and colored (including manila) Kraft, unbleached Excludes custom envelopes	30% 10–20% 10%	30% 10–20% 10%
Cotton Fiber	High-quality papers used for stationery, invitations, currency, ledgers, maps, and other specialty items	30%	30%
Text and Cover	Premium papers used for cover stock, books, stationery, and matching envelopes	30%	30%
Supercalendered	Groundwood paper used for advertising and mail order inserts, catalogs, and some magazines	10%	10%
Machine Finished Groundwood	Groundwood paper used in magazines and catalogs	10%	10%
Papeteries	Used for invitations and greeting cards	30%	30%
Check Safety	Used in the manufacture of commercial and government checks	10%	10%
Coated	Used for annual reports, posters, brochures, and magazines. Have gloss, dull, or matte finishes	10%	10%
Carbonless	Used for multiple-impact copy forms	30%	30%
File Folders	Manila or colored	30%	30%
Dyed Filing Products	Used for multicolored hanging folders and wallet files	20%	20–50%
Index and Card Stock	Used for index cards and postcards	20%	50%
Pressboard	High-strength paperboard used in binders and report covers	20%	50%
Tags and Tickets	Used for toll and lottery tickets, licences, and identification and tabulating cards	20%	20–50%

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PAPER PRODUCT	NOTES	POST-CONSUMER RECOVERED FIBER	TOTAL RECOVERED FIBER
Newsprint			
Newsprint	Groundwood paper used in newspaper	20-85%	20-100%
Commercial Sanitary Tissue Products			
Bathroom Tissue	Used in rolls or sheets	20-60%	20-100%
Paper Towels	Used in rolls or sheets	40-60%	40-100%
Paper Napkins	Used in food service applications	30-60%	30-100%
Facial Tissue	Used for personal care	10-15%	10-100%
General-purpose Industrial Wipers	Used in cleaning and wiping applications	40%	40-100%
Paperboard and Packaging Products			
Corrugated Containers	Used for packaging and shipping a variety of goods (<300 psi) (300 psi)	25-50% 25-30%	25-50% 25-30%
Solid Fiber Boxes	Used for specialized packaging needs such as dynamite packaging and army ration boxes	40%	40%
Folding Cartons	Used to package a wide variety of foods, household products, cosmetics, pharmaceuticals, detergent, and hardware	40-80%	100%
Industrial Paperboard	Used to create tubes, cores, cans, and drums	45-100%	100%
Miscellaneous	Includes "chipboard" pad backings, book covers, covered binders, mailing tubes, game boards, and puzzles	75-100%	90-100%
Padded Mailers	Made from Kraft paper that is usually brown but can be bleached white	5-15%	5-15%
Carrierboard	A type of folding carton designed for multipack beverage cartons	10-15%	10-100%
Brown Papers	Used for bags and wrapping paper	5-20%	5-40%
Miscellaneous Paper Products			
Tray Liners	Used to line food service trays. Often contain printed information	50-75%	100%

Paper Buying Tips

To make it even easier to buy recycled-content paper products, EPA offers the following purchasing tips for the various paper product categories outlined in the RMAN. Printing and writing papers comprise one of the largest categories of paper and paper products. Examples include stationery, computer printout paper, note pads, copier paper, and offset paper. Printing and writing papers can be uncoated or coated. When buying printing and writing paper, remember to:

- Work with your printer. Different papers exhibit differences in performance and printability. Some printers might first want to test certain papers with a particular ink. Printers also can help you select papers based on how they will be used (i.e., whether they will be folded, die-cut, or made into self-mailers).
- Work with your graphic designer. Some papers are better than others for certain design needs. Make sure both the designer and printer agree that the paper you choose will meet your expectations.
- Consider the environmental ramifications of your purchasing decisions. Papers with certain characteristics, such as deep colors, coatings, or groundwood content, might not be recyclable in your existing office paper recycling program or might require changes to the program. Consider the effects of your paper purchases before deciding to purchase a specific paper.

Newsprint is a type of groundwood paper generally used to print newspapers. Recycled-content newsprint is usually manufactured from fiber recovered from old newspapers and magazines. The federal government uses newsprint for printing the *Federal Register* (FR), Congressional Record, and other publications.

When purchasing newsprint, consider these helpful hints:

- Pay attention to newsprint's basis weight. Basis weight is the weight in pounds of a ream of paper cut to a specified size. Different weights hold up better in different presses. Recycled-content newsprint ranging from 25 to 32 pounds generally performs well. The U.S. Government Printing Office specifies 28 pound recycled-content newsprint.
- Consider your requirements for the newsprint you are buying. Recycled-content newsprint manufacturers are making products that meet

their clients' performance requirements (e.g., print-ability, brightness, cleanliness, and opacity).

- Determine whether newsprint is recyclable in your existing recycling program. Some office paper recycling programs do not accept groundwood papers such as newsprint; find out whether yours does before you buy newsprint. Sanitary tissue products include bathroom and facial tissue, paper towels, napkins, and general-purpose industrial wipers.

When purchasing these products, remember these tips:

- Avoid misconceptions about softness, absorbency, and strength. Some recycled-content sanitary tissue products are softer, stronger, and more absorbent than others. Consider your aesthetic and functional requirements for tissue products before purchasing a specific product.
- Remember to review your janitorial supply contracts because commercial tissue products often are purchased through contractors. Make sure your supply contracts specify recycled-content, not virgin, products.
- When changing brands, consider other factors that could influence your purchasing decision. When switching from sheet to roll paper towels, for example, you might incur costs to replace dispensers or fixtures if such costs are not borne by the supplier.

Paperboard and packaging is a broad category of paper products that includes corrugated containers, folding cartons, book and report covers, mailing tubes, video cassette boxes, paper bags, and wrapping paper. They can be manufactured with a wide variety of recovered fibers including old newspapers, old corrugated containers, mixed papers, and sorted white office paper. In fact, paperboard mills use more recovered fiber than any other segment of the paper industry.

When purchasing recycled-content paperboard and packaging, consider these tips:

- Remember, you can print on recycled boxes, not just on virgin, bleached boxes.
- Be aware that you can use recycled boxes in food applications and still meet U.S. Food and Drug Administration requirements.

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COMPREHENSIVE
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PARK & RECREATION



Buying recycled products...

- ...conserves natural resources
- ...saves energy
- ...reduces solid waste
- ...reduces air and water pollutants
- ...reduces greenhouse gases
- ...creates new jobs



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Buy-Recycled Series

PARK & RECREATION PRODUCTS

Want to go the extra mile for your community? Buying recycled-content playground equipment and other recreational products is cost-effective, easy to do, and a good way to keep our outdoors green. You also can provide long-lasting protection for sand dunes at your community's beaches using plastic fencing made from recovered plastics.

To make it easier to buy recycled, the U.S. Environmental Protection Agency (EPA) periodically updates the Comprehensive Procurement Guidelines (CPG). Through the CPG, EPA designates items that must contain recycled materials when purchased with appropriated federal funds by federal, state, and local agencies, or by government contractors. Several park and recreation products are among these items. EPA's research shows that the items designated in the CPG are of high quality, widely available, and cost-competitive with virgin products. EPA also issues

nonregulatory companion guidance—the Recovered Materials Advisory Notice (RMAN)—that recommends levels of recycled content for these items.

Why Buy Recycled?

Recycling is more than just dropping off your cans, bottles, and newspapers at the curb or at a local collection facility. Diverting recyclables from the waste stream is only the first of three steps in the recycling process. The second step occurs when companies use these recyclables to manufacture new products. The third step comes when you purchase products made from recovered materials.

Buying recycled products results in many environmental benefits. It supports local recycling programs by creating markets for the collected materials that are processed and used to manufacture new products. This creates jobs and helps strengthen the economy; conserves natural resources; saves energy; and reduces solid waste, air and water pollutants, and greenhouse gases that contribute to global warming.

What Is CPG?

The Resource Conservation and Recovery Act (RCRA) requires procuring agencies to buy recycled-content products designated by EPA in the CPG. Issued in May 1995, the first CPG designated 19 new products, including playground surfaces and running tracks, and incorporated five previously designated items in eight product categories. The first CPG update (CPG II) was published in November 1997 and designated an additional 12 products, including plastic fencing. A second CPG update (CPG III) was published in January 2000 and designated an additional 18 products, including park benches, picnic tables, and playground equipment. The third CPG update (CPG IV) was published in April 2004, designating seven new products. The fourth CPG update (CPG V), published in September 2007, designated one new item and revised another designation. Neither of the last two updates designated any new park and recreation products. For more information, visit www.epa.gov/epaoswer/non-hw/procure/about.htm.

Procuring agencies include all federal agencies, and any state or local government agencies or government contractors that use appropriated federal funds to purchase the designated items. If your agency spends more than \$10,000 per year on a product designated in the CPG, you are required to purchase it with the highest recycled-content level practicable. The CPG also applies to lease contracts covering designated items. Executive Order (E.O.) 13423 and the Federal Acquisition Regulation also call for an increase in the federal government's use

of recycled-content and environmentally preferable products.

Once any new items are designated in a published CPG update, an agency has 1 year to develop an affirmative procurement program (or revise an existing one) to include these new items. In previous years, agencies have had to revise their affirmative procurement programs to incorporate buy-recycled requirements for items such as playground surfaces, running tracks, plastic fencing, park benches, picnic tables, and playground equipment. This effort might have involved reviewing specifications for those products and eliminating provisions that pose barriers to procuring them with recycled content (such as aesthetic requirements unrelated to product performance). Since CPG V designates no new park and recreation products, agencies are not required to revise this portion of their affirmative procurement program.

The CPG acknowledges that specific circumstances might arise that preclude the purchase of products made with recovered materials. Your agency may purchase designated items that do not contain recovered materials if it determines that: 1) the price of a given designated item made with recovered materials is unreasonably high; 2) there is inadequate competition (not enough sources of supply); 3) unusual and unreasonable delays would result from obtaining the item; or 4) the recycled-content item does not meet an agency's reasonable performance specifications.

How Do I Purchase Recycled-Content Park & Recreation Products?

EPA issues purchasing guidance in RMANs, which are designed to make it as easy as possible to buy the designated items. The RMANs recommend recycled-content levels to look for when purchasing park and recreation products, as shown in the table below. Following the RMANs' recommended levels will help ensure your affirmative procurement program and standards meet the buy-recycled requirements. The RMANs also provide other purchasing guidance. Please refer to <www.epa.gov/cpg/products.htm> for more information on individual products.

Rather than specifying just one level of recycled content, the RMANs recommend ranges that reflect actual market conditions. The recommendations are based on market research identifying recycled-content products that are commercially available, are competitively priced, and meet buyers' quality standards.

Access EPA's online recycled-content products database by going to <www.epa.gov/cpg> and selecting "Supplier Database." See the last section of this resource guide for other helpful resources.

EPA's Recommended Content Levels for Park & Recreation Products

PARK & RECREATION PRODUCT ¹	MATERIAL	POST-CONSUMER RECOVERED CONTENT ²	TOTAL RECOVERED CONTENT ²
Park Benches and Picnic Tables	Plastic ³	90–100%	100%
	Plastic Composites	50–100%	100%
	Aluminum	25%	—
	Concrete	—	15–40%
	Steel ⁴	16% 67%	25–30% 100%
Plastic Fencing for Specified Uses ⁵	Plastic	60–100%	90–100%
Playground Equipment	Plastic ³	90–100%	100%
	Plastic Composites	50–75%	95–100%
	Steel ⁴	16% 67%	25–30% 100%

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PARK & RECREATION PRODUCT ¹	MATERIAL	POST-CONSUMER RECOVERED CONTENT ²	TOTAL RECOVERED CONTENT ²
Playground Surfaces	Plastic or Rubber	90–100%	—
Running Tracks	Plastic or Rubber	90–100%	—

¹ EPA's recommendations do not preclude a procuring agency from purchasing these items manufactured from another material. They simply require that a procuring agency purchase these items made with recovered materials when these items meet applicable specifications and performance requirements. Federal agency installations of these products must comply with applicable state or local construction codes, as well as standards set by the Consumer Product Safety Commission and the Americans with Disabilities Act.

² The recommended recovered materials content levels are based on the dry weight of the raw materials, exclusive of any additives such as adhesives, binders, or coloring agents.

³ "Plastic" includes both single and mixed plastic resins. Park benches and picnic tables made with recovered plastic also may contain other recovered materials, such as sawdust, wood, or fiberglass. The percentage of these materials contained in the product also would count toward the recovered materials content level of the item.

⁴ The recommended recovered materials content level for steel in this table reflects the fact that the designated items can be made from steel manufactured from either a Basic Oxygen Furnace (BOF) or an Electric Arc Furnace (EAF). Steel from the BOF process contains 25–30 percent total recovered materials, of which 16 percent is post-consumer steel. Steel from the EAF process contains a total of 100 percent recovered steel, of which 67 percent is post-consumer.

⁵ Designation includes fencing containing recovered plastic for use in controlling snow or sand drifting and as a warning/safety barrier in construction or other applications.

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TRANSPORTATION



Buying recycled products...

- ...conserves natural resources
- ...saves energy
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- ...reduces air and water pollutants
- ...reduces greenhouse gases
- ...creates new jobs



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Buy-Recycled Series

TRANSPORTATION PRODUCTS

The road is clear for buying recycled-content products, and many agencies are moving into high gear! Transportation officials around the country are reporting that recycled-content safety cones, traffic barricades, traffic control devices, and parking stops deliver high performance and cut installation and maintenance costs.

To make it easier to buy recycled, the U.S. Environmental Protection Agency (EPA) periodically updates the Comprehensive Procurement Guidelines (CPG). Through the CPG, EPA designates items that must contain recycled materials when purchased with appropriated federal funds by federal, state, and local agencies, or by government contractors. Several transportation products are among these items. EPA's research shows that the items designated in the CPG are of high quality, widely available, and cost-competitive with virgin products.

EPA also issues nonregulatory companion guidance—the Recovered Materials Advisory Notice (RMAN)—that recommends levels of recycled content for these items.

Why Buy Recycled?

Recycling is more than just dropping off your cans, bottles, and newspapers at the curb or at a local collection facility. Diverting recyclables from the waste stream is only the first of three steps in the recycling process. The second step occurs when companies use these recyclables to manufacture new products. The third step comes when you purchase products made from recovered materials.

Buying recycled products results in many environmental benefits. It supports local recycling programs by creating markets for the collected materials that are processed and used to manufacture new products. This creates jobs and helps strengthen the economy; conserves natural resources; saves energy; and reduces solid waste, air and water pollutants, and greenhouse gases that contribute to global warming.

What Is CPG?

The Resource Conservation and Recovery Act (RCRA) requires procuring agencies to buy recycled-content products designated by EPA in the CPG. Issued in May 1995, the first CPG designated 19 new products (including traffic barricades and traffic cones) and incorporated five previously designated items in eight product categories. The first CPG update (CPG II) was published in November 1997 and designated an additional 12 items, including parking stops and traffic control devices. A second CPG update (CPG III) was published in January 2000 and designated an additional 18 items. A third CPG update (CPG IV) was published in April 2004 and designated seven new products. The fourth CPG update (CPG V), published in September 2007, designated one new item and revised another designation. None of the last three updates designated any transportation products. For more information, visit www.epa.gov/epaoswer/non-hw/procure/about.htm.

Procuring agencies include all federal agencies, and any state or local government agencies or government contractors that use appropriated federal funds to purchase the designated items. If your agency spends more than \$10,000 per year on a product designated in the CPG, you are required to purchase it with the highest recycled-content level practicable. The CPG also applies to lease contracts covering designated items. Executive Order (E.O.) 13423 and the

Federal Acquisition Regulation also call for an increase in the federal government's use of recycled-content and environmentally preferable products.

Once any new items are designated in a published CPG update, an agency has 1 year to develop an affirmative procurement program (or revise an existing one) to include these new items. By May 1, 1996, agencies were required to develop affirmative procurement programs to incorporate buy-recycled requirements for traffic cones and barricades. By November 13, 1998, agencies were required to revise their affirmative procurement programs to incorporate parking stops and traffic control devices. Since CPG V designates no new transportation products, agencies are not required to revise this portion of their affirmative procurement program.

The CPG acknowledges, however, that specific circumstances might arise that preclude the purchase of products made with recovered materials. Your agency may purchase designated items that do not contain recovered materials if it determines that: 1) the price of a given designated item made with recovered materials is unreasonably high; 2) there is inadequate competition (not enough sources of supply); 3) unusual and unreasonable delays would result from obtaining the item; or 4) the recycled-content item does not meet the agency's reasonable performance specifications.

How Do I Purchase Recycled-Content Transportation Products?

EPA issues purchasing guidance in RMANs, which are designed to make it as easy as possible to buy the designated items. The RMANs recommend recycled-content levels to look for when purchasing transportation products, as shown in the table below. Following the RMANs' recommended levels will help ensure your affirmative procurement program and standards meet the buy-recycled requirements. The RMANs also provide other purchasing guidance. Please refer to <www.epa.gov/cpg/products.htm> for more information on individual products.

Rather than specifying just one level of recycled content, the RMANs recommend ranges that reflect actual market conditions. The recommendations are based on market research identifying recycled-content products that are commercially available, are competitively priced, and meet buyers' quality standards.

Access EPA's online recycled-content products database by going to <www.epa.gov/cpg> and selecting "Supplier Database." See the last section of this resource guide for other helpful resources.

EPA's Recommended Content Levels for Transportation Products

TRANSPORTATION PRODUCT ²	MATERIAL RECOVERED	POST-CONSUMER RECOVERED CONTENT ³	TOTAL RECOVERED CONTENT ³
Traffic Cones	Plastic (Polyvinyl Chloride [PVC] and Low-density Polyethylene [LDPE])	—	50–100%
	Crumb Rubber	—	50–100%
Traffic Barricades	Plastic (High-density Polyethylene [HDPE], LDPE, Polyethylene Terephthalate [PET])	80–100%	100%
	Steel ⁴	16%	25–30%
	Fiberglass	67%	100%
		—	
Parking Stops	Plastic and/or Rubber	—	100%
	Concrete Containing Coal Fly Ash	Generally, 20–30% but could be up to 40%. When used as a partial cement replacement as an admixture in concrete, 15%.	
	Concrete Containing Ground Granulated Blast Furnace (GGBF) Slag	—	25–70%

TRANSPORTATION PRODUCT ²	MATERIAL RECOVERED	POST-CONSUMER RECOVERED CONTENT ³	TOTAL RECOVERED CONTENT ³
Traffic Control Devices:			
Channelizers	Plastic	25–90%	—
	Rubber (base only)	100%	—
Delineators	Plastic	25–90%	—
	Rubber (base only)	100%	—
	Steel (base only) ⁴	16%	25–30%
		67%	100%
Flexible Delineators	Plastic PET	25–85%	—

¹ Transportation products containing recovered materials must conform to the Manual on Uniform Traffic Control Devices used by the Federal Highway Administration, as well as other applicable federal requirements and specifications.

² EPA's recommendations do not preclude procuring agencies from purchasing transportation products manufactured using other materials. EPA simply recommends that procuring agencies, when purchasing transportation products designated in the procurement guidelines, purchase these products containing recovered materials.

³ Content levels are based on the dry weight of the raw materials, exclusive of any additives such as adhesives, binders, or coloring agents.

⁴ The recommended recovered materials content level for steel in this table reflects the fact that the designated items can be made from steel manufactured from either a Basic Oxygen Furnace (BOF) or an Electric Arc Furnace (EAF). Steel from the BOF process contains 25–30 percent total recovered materials, of which 16 percent is post-consumer steel. Steel from the EAF process contains a total of 100 percent recovered steel, of which 67 percent is post-consumer.

Key Terms

- **Channelizers:** Channelizers are barrels or drums that direct traffic around areas of road repair and construction. Street maintenance agencies and construction contractors use channelizers on construction sites, medians, on/off ramps, mountainous terrain, and areas where fog and haze are common. Channelizers are designed and colored to be highly visible and can be constructed from recovered HDPE and rubber. The bases of the drums are weighted to provide stability and often are made from used tires.
- **Delineators:** Delineators are temporary pavement markers that come in many shapes, sizes, and compositions. They are manufactured primarily from recovered and post-consumer HDPE. Delineator bases are either steel stakes that can be driven into the ground or rubber to support the delineator on the road surface.
- **Flexible Delineators:** These products come in the form of stakes and are driven into the ground. The product is flexible enough so that vehicles can strike them without causing damage to the vehicle or the delineator. They are used at golf courses, airports, military bases, shopping centers, and recreation areas.
- **Parking Stops:** Commonly found in parking lots, parking stops are used to mark parking spaces and keep vehicles from rolling beyond a designated parking area.
- **Traffic Barricades:** Traffic barricades are used to redirect or restrict traffic in areas of highway construction or repair. They are typically made from wood, steel, plastic, or a combination of these materials. Many manufacturers have switched to the use of recycled materials in both the supporting frame and rails of the barricades.
- **Traffic Cones:** Traffic cones are used to mark a road hazard or direct traffic. In general, both recovered- and post-consumer-content plastics are used in the upper component of the cones, and crumb rubber and/or plastics are used in the base.

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VEHICULAR



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Buy-Recycled Series

VEHICULAR PRODUCTS

If you are a fleet manager, buying recycled products can take you a long way down the road toward protecting the environment and saving resources. Cost-effective, reliable, and high-quality recycled-content vehicular products, such

as re-refined oil, retread tires, recycled engine coolants, and rebuilt vehicular parts are being used with success by many government agencies nationwide.

To make it easier to buy recycled, the U.S. Environmental Protection Agency (EPA) periodically updates the Comprehensive Procurement Guidelines (CPG). Through the CPG, EPA designates items that must contain recycled materials when purchased with appropriated federal funds by federal, state, and local agencies, or by government contractors. Several vehicular products are among these items.

EPA's research shows that the items designated in the CPG are of high quality, widely available, and

cost-competitive with virgin products. EPA also issues non-regulatory companion guidance—the Recovered Materials Advisory Notice (RMAN)—that recommends levels of recycled content for these items.

Why Buy Recycled?

Recycling is more than just dropping off your cans, bottles, and newspapers at the curb or at a local collection facility. Diverting recyclables from the waste stream is only the first of three steps in the recycling process. The second step occurs when companies use these recyclables to manufacture new products. The third step comes when you purchase products made from recovered materials.

Buying recycled products results in many environmental benefits. It supports local recycling programs by creating markets for the collected materials that are processed and used to manufacture new products. This creates jobs and helps strengthen the economy; conserves natural resources; saves energy; and reduces solid waste, air and water pollutants, and greenhouse gases that contribute to global warming.

What Is CPG?

The Resource Conservation and Recovery Act (RCRA) requires procuring agencies to buy recycled-content products designated by EPA in the CPG. Issued in May 1995, the first CPG designated 19 new products (including engine coolants) and incorporated five previously designated items (including re-refined lubricating oils and retread tires) in eight product categories. The first CPG update (CPG II) was published in November 1997. A second CPG update (CPG III) was published in January 2000. Neither of these updates designated any new vehicular products. The third CPG update (CPG IV), published in April 2004, designated seven new products, including rebuilt vehicular parts. The fourth CPG update (CPG V), published in September 2007, designated one new item and revised another designation, but did not designate any new vehicular products. For more information, visit www.epa.gov/epaoswer/non-hw/procure/about.htm.

Procuring agencies include all federal agencies, and any state or local government agencies or government contractors that use appropriated federal funds to purchase the designated items. If your agency spends more than \$10,000 per year on a product designated in the CPG, you are required to purchase it with the highest recycled-content level practicable. The CPG also applies to lease contracts covering designated items. Executive Order (E.O.) 13423 and the Federal Acquisition Regulation also call for an increase in the federal government's use of recycled-content and environmentally preferable products.

Once any new items are designated in a published CPG update, an agency has 1 year to develop an affirmative procurement program (or revise an existing one) to include these new items. By May 1, 1996, agencies were required to develop affirmative procurement programs to incorporate buy-recycled requirements for re-refined lubricating oils, retread tires, and engine coolants. Agencies also were required to revise their affirmative procurement programs to include the new items designated under CPG IV by April 30, 2005. This effort might have involved reviewing specifications for those items and eliminating provisions that pose barriers to procuring them with recycled content (such as aesthetic requirements unrelated to product performance). Since CPG V designates no new vehicular products, agencies are not required to revise this portion of their affirmative procurement program.

The CPG acknowledges that specific circumstances might arise that preclude the purchase of products made with recovered materials. Your agency may purchase designated items that do not contain recovered materials if it determines that: 1) the price of a given designated item made with recovered materials is unreasonably high; 2) there is inadequate competition (not enough sources of supply); 3) unusual and unreasonable delays would result from obtaining the item; or 4) the recycled-content item does not meet the agency's reasonable performance specifications.

How Do I Purchase Recycled-Content Vehicular Products?

EPA issues purchasing guidance in RMANs, which are designed to make it as easy as possible to buy the designated items. The RMANs recommend recycled-content levels to look for when purchasing vehicular products, as shown in the table below. Following the RMANs' recommended levels will help ensure your affirmative procurement program and standards meet the buy-recycled requirements. The RMANs also provide other purchasing guidance. Please refer to <www.epa.gov/cpg/products.htm> for more information on individual products.

Rather than specifying just one level of recycled content, the RMANs recommend ranges that reflect actual market conditions. The recommendations are based on market research identifying recycled-content products that are commercially available, are competitively priced, and meet buyers' quality standards.

Access EPA's online recycled-content products database by going to <www.epa.gov/cpg> and selecting "Supplier Database." See the last section of this guide for other helpful resources.

EPA's Recommended Content Levels for Vehicular Products

VEHICULAR PRODUCT	RECOMMENDATIONS
Re-refined Oil	Use 25% or more re-refined oil base stock for engine lubricating oils, hydraulic fluids, and gear oils.
Retread Tires	<p>Procurement of tire retreading services for agencies' used tire casings: EPA recommends that procuring agencies specify that tire repair and retread services must conform to Federal Specification ZZ-T-441H (or current version).</p> <p>Procurement of tires through competition between vendors of new tires and vendors of retread tires: EPA recommends that procuring agencies specify that retread tires must meet the requirements of Federal Specification ZZ-T-381, "Tires, Pneumatic, Vehicular (Highway) (New and Retreaded)."</p>
Engine Coolants	Reclaim engine coolants onsite or contract for offsite reclamation services. Also request reclaimed engine coolant when having vehicles serviced at commercial service centers and buy it when making direct purchases.
Rebuilt Vehicular Parts	EPA recommends that procuring agencies whose vehicles (passenger vehicles as well as medium- and heavy-duty equipment, including trucks, cranes, off-road vehicles, and military vehicles) are serviced by a motor pool or vehicle maintenance facility establish a service contract to require the use of rebuilt vehicular parts in the agencies' vehicles or establish a program for vehicular parts rebuilding and reuse consisting of either recovering a used vehicular part and rebuilding it, replacing it with a rebuilt part, or contracting to have the part replaced with a rebuilt part. This designation applies to vehicles served by both onsite and commercial facilities.

Myths and Facts About Recycled-Content Vehicular Products

People are often reluctant to try new technologies. Recycled-content products are no exception. Out-of-date and incorrect information about the uses and benefits of recycled-content products lead people to believe that they do not work as well as virgin products. Several agencies using recovered-content products, however, have proven that these products work well and are cost-effective. Some of the common myths about recycled-content vehicular products are dispelled below. At the end of this resource guide, you can find an extensive list of additional resources for more information.

Re-refined Oil

MYTH: Re-refined lubricating oil is inferior to new lubricating oil.

FACT: Re-refined oil is subject to the same stringent refining, compounding, and performance standards as virgin oil. Extensive laboratory testing and field studies conducted by the National Institute of Standards and Technology, the U.S. Army, the U.S. Department of Energy, the U.S. Postal Service, and EPA concluded re-refined oil is equivalent to virgin oil, passes all prescribed tests, and can even outperform virgin oil. The American Petroleum Institute (API) has licensed qualified re-refined oil products, which display the API starburst and/or donut symbol.



MYTH: Using re-refined oil voids manufacturers' warranties.

FACT: All three major U.S. automobile manufacturers (i.e., Ford, General Motors, and Chrysler) now recognize that re-refined oil meets the performance criteria specified in their warranties. Each has issued a written statement explaining that the use of re-refined oil will not void warranties. Warranty requirements are based on performance criteria and not on the origin of the base oil. As long as the purchased oil meets the warranty requirements, the warranty must be honored.

Retread Tires

MYTH: Retreads are less safe than new tires.

FACT: Statistics compiled by the U.S. Department of Transportation show that nearly all tires involved in any tire-related accidents were underinflated or bald. Properly maintained tires, both new and retreaded, do not cause accidents. Retread tires have been safely used on school buses, trucks, cars, fire engines, and other emergency vehicles for years.



MYTH: Retreads have a higher failure rate than new tires.

FACT: Rubber on the road comes from both new tires and retread tires, primarily from truck tires that are overloaded, underinflated, or otherwise abused. New or retread tire failures can be greatly reduced by following all the rules of good maintenance, including proper mating with regard to diameter and tread depth and design, and maintaining proper air pressure.

Recycled Engine Coolants

MYTH: Recycled engine coolant is inferior to new engine coolant.

FACT: Testing shows recycled coolant meets nationally recognized performance specifications for new coolant, such as those established by the American Society for Testing and Materials and the Society of Automotive Engineers. The recycling process reduces the chlorides that come from hard water so that recycled antifreeze might actually be purer than virgin coolant.



MYTH: Recycled coolant costs more than new coolant.

FACT: Recycled coolant might cost less than new coolant if you select the right recycling process for your shop. You must consider the cost of new coolant and your current disposal costs and compare these to the cost of onsite or offsite recycling.

MYTH: Spent coolants are hazardous waste and those handling them must follow hazardous waste regulations.

FACT: Spent coolants are not listed by EPA as a hazardous waste. Some older test data indicated used coolant sometimes had levels of lead requiring it to be managed as a hazardous waste. Most new vehicle radiators are made with aluminum cores and plastic tanks, so there is less opportunity for lead contamination of coolant today than in the past. Still, some states consider coolant to be hazardous. Contact your state environmental agency for further information.

MYTH: Recycled coolant will void manufacturers' warranties.

FACT: Coolant recyclers have worked with automotive and truck engine original equipment manufacturers (OEMs) to get their approval on coolant recycling processes. Check with your recycler for a list of OEM approvals.

Coolant Recycling Processes

The RMAN recommends that procuring agencies establish a program for engine coolant reclamation and reuse either on site or through a service contract. There are three general types of coolant recycling processes: filtration, distillation, and ion exchange. Since variations exist among the various processes, check with the system manufacturer for specifics regarding coolant produced by the system.

Filtration is the most common type of coolant recycling process. It has the lowest initial investment but has high operating costs. Coolants often contain dissolved solids and filtration systems often require pre- and post-filter treatment as well.

Distillation evaporates and recondenses the coolant. This is a slow process with a high initial investment, but it requires less operator time and lower operating costs. Solids and other chemicals are left behind as a residue that must be managed according to applicable laws.

Ion exchange removes solids and other chemicals from the coolant as it passes through a resin bed. Periodically, this bed must be regenerated to remove the buildup. Equipment costs are higher than most other systems. Operating costs are comparable to filtration systems.

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EPA WaterSense Standards

The EPA WaterSense Standards are a partnership program sponsored by the EPA that makes it easy for MCAS Miramar to save water and protect the environment. Look for the WaterSense label to choose water-efficient products. To find appropriate products, see Table D-1 that lists all the EPA WaterSense labeled products, or go to www.epa.gov/WaterSense/pp/index.htm to search the EPA's website.



Table D-1. EPA WaterSense Standard Products

Brand Name	Model Name	Model Number		
		HET	Tank	Bowl
American Standard	Cadet 3 FloWise Elongated Toilet	2832.128	4021.128	3014.128
American Standard	Cadet 3 FloWise Right Height Elongated Toilet	2835.128	4021.128	3016.128
American Standard	Cadet 3 FloWise Round Front Toilet	2829.128	4021.128	3011.128
American Standard	Cadet3 FloWise Compact EL One-piece Complete Toilet	2568.128		
American Standard	Cadet3 FloWise RH EL 12" Complete Toilet	3305.128	4021.128	3016.128
American Standard	FloWise	2073.014	4023	3018
American Standard	FloWise Cadet3 1-pc	2403.128		
American Standard	FloWise Dual Flush	2479.216	4035.216	3067.216
American Standard	FloWise Dual Flush Elongated Toilet, Lined Tank	2479.516	4035.516	3067.216
American Standard	FloWise Dual Flush Right Height Elongated Complete Toilet Lined Tank	2566.516	4035.516	3073.216
American Standard	FloWise Dual Flush Right Height Elongated Toilet	2480.216	4035.216	3073.216
American Standard	FloWise Dual Flush Right Height Elongated Toilet	2566.216	4035.216	3073.216
American Standard	FloWise Dual Flush Right Height Elongated Toilet	2480.516	4035.516	3073.216

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Brand Name	Model Name	Model Number		
	Lined Tank			
American Standard	Mainstream FloWise RF Complete Toilet	3468.128	4061.428	3061.428
American Standard	NH EL Dual Flush Combo Toilet	2476.216	4035.216	3067.316
American Standard	NH EL Dual Flush Complete	2779.516	4035.516	3067.316
American Standard	NH EL Dual Flush Lined Combination	2476.516	4035.516	3067.316
American Standard	RH EL Dual Flush Combination	2484.216	4035.216	3073.316
American Standard	RH EL Dual Flush Complete	2778.516	4035.516	3073.316
American Standard	RH EL Dual Flush Lined, Combination	2484.516	4035.516	3073.316
AquaSource (a Lowe's brand)	AquaSource	005905		
Briggs	Conservor	4207	4484	4370
Briggs	Conservor	4208	4484	4375
Briggs	ProFlo		PF9212	PF9201
Briggs	ProFlo		PF9212	PF9200
Caroma	Adelaide 270 Cube		814790	834000
Caroma	Adelaide 270 Cube EH		814790	825500
Caroma	Adelaide 270 Standard		814328	834000
Caroma	Adelaide 270 Standard EH		814328	825500
Caroma	Bondi 270		726350	609159
Caroma	Bondi 270 EH		726350	607177
Caroma	Bondi 270 Elongated		726350	609100
Caroma	Bondi 270 Elongated EH		726350	609120
Caroma	Bondi 305		726350	609151
Caroma	Bondi 305 Elongated		726350	609130
Caroma	Brisbane 270		810266	833900
Caroma	Caravelle 270		629435	609159
Caroma	Caravelle 270 EH		629435	609177
Caroma	Caravelle 270 EH Elongated		629435	609120
Caroma	Caravelle 305		629435	609151
Caroma	Caravelle Elongated 270		629435	609100
Caroma	Caravelle Elongated 305		629435	609130
Caroma	Caravelle One	989646		

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Brand Name	Model Name	Model Number		
	Piece			
Caroma	Caravelle One Piece EH	989668		
Caroma	Colonial 270		625070	605310
Caroma	Colonial 270 EH		625070	605320
Caroma	Profile Smart 305		840420W	609151A
Caroma	Royale 270		624530	609159
Caroma	Royale 270 EH		624530	609177
Caroma	Royale 270 EH Elongated		624530	609120
Caroma	Royale 270 Elongated		624530	609100
Caroma	Royale 305		624530	609151
Caroma	Royale 305 Elongated		624530	609130
Caroma	Sydney 270		622320	609159
Caroma	Sydney 270 EH		622320	609177
Caroma	Sydney 270 EH Elongated		622320	609120
Caroma	Sydney 270 Elongated		622320	609100
Caroma	Sydney 305		622320	609151A
Caroma	Sydney 305 Elongated		622320	609130
Caroma	Sydney Low Profile 270 EH		622330	609177
Caroma	Sydney Low Profile 270 EH Elongated		622330	609120
Caroma	Sydney Low Profile 270 Elongated		622330	609100
Caroma	Sydney Low Profile 270 Round		622330	609159
Caroma	Sydney Low Profile 305		622330	609151A
Caroma	Sydney Low Profile 305 Elongated		622330	609130
Caroma	Sydney Smart 270		622322	609159
Caroma	Sydney Smart 270 EH		622322	609177
Caroma	Sydney Smart 270 EH Elongated		622322	609120
Caroma	Sydney Smart 270 Elongated		622322	609100
Caroma	Sydney Smart 305		622322	609151A
Caroma	Sydney Smart 305 Elongated		622322	609130
Cascadian	Toscano		T901	C930
Crane	Eco Opus III	31692	31542	31562
Crane	Eco Opus III	31693	31543	31562

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Brand Name	Model Name	Model Number		
Crane	EcoGalaxy/Cranada	31007	31590	3352
Crane	EcoGalaxy/Cranada	31008	31590	3372
Crane	EcoGalaxy/Cranada	31067	31593	3352
Crane	EcoMiser	38370	31500	3827
Crane	EcoMiser	38400	31500	3830
Crane	EcoMiser BigFoot	38335	31500	31124
Crane	EcoMiser BigFoot	38345	31500	31125
Crane	EcoMiser BigFoot ADA	38355	31500	31128
Crane	Economiser One	31884	31612	31124
Crane	Economiser One BigFoot	31885	31612	31125
Crane	Economiser One BigFoot	31888	31612	31128
Crane	EcoSaratoga	31970	31960	3352
Crane	EcoSaratoga	31972	31964	3352
Crane	EcoSaratoga	31973	31964	3372
Crane	EcoSaratoga	31976	31966	3352
Crane	EcoSaratoga	31980	31960	3372
Crane	EcoSaratoga	31986	31966	3372
Duravit	2nd Floor Wall Hung Toilet		111.335	220509
Duravit	Caro Wall Hung Toilet		111.335	015609
Duravit	D-Code Two-Piece Toilet		092720	011701
Duravit	Darling Wall Hung Toilet		111.335	020709
Duravit	Foster Wall Hung Toilet		111.335	017509
Duravit	Happy D Two-Piece Toilet		091010	017009
Duravit	Happy D Wall Hung Toilet		111.335	017109
Duravit	Starck 2 Wall Hung Toilet		111.335	016009
Duravit	Starck 3 Two-Piece Toilet		092010	012809
Duravit	Starck 3 Wall Hung Toilet		111.335	220009
Duravit	Starck X Wall Hung Toilet		111.335	220409
Duravit	Vero Floor Standing Toilet		109.304	211709
Duravit	Vero Two-Piece Toilet		090910	211609
Duravit	Vero Wall Hung Toilet		111.335	221709
Foremost		TL-6100-EWN		

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Brand Name	Model Name	Model Number		
Foremost		TL-7600HC-HET-W	T-7600-HET-W	LL-7600HC-HET-W
Foremost		TL-7600HC-HET-WL	T-7600-HET-WL	LL-7600HC-HET-W
Foremost		TL-7600HC-HETR-W	T-7600-HET-W	LL-7600HC-HETR-W
Foremost		TL-7600HC-HETR-WL	T-7600-HET-WL	LL-7600HC-HETR-W
Foremost		TL-7700HC-HET-W	T-7700-HET-W	LL-7700HC-HET-W
Foremost	AIO	AIO1000-EW	AIOT1000-W	AIOB1000-EW
Foremost	AIO	AIO1000-RW	AIOT1000-W	AIOB1000-RW
Foremost	Plaza	TL-7107-WL	T-7107-WL	LL-7107-W
Foremost	Total	TT-2000E-WL	T-2000-WL	LL-2000E-W
Foremost	Total	TT-2010-WL	T-2010-WL	LL-2010-W
Gerber	Ultra Flush	DF-21-302	DF-28-380	21-342
Gerber	Ultra Flush	DF-21-304	DF-28-384	21-342
Gerber	Ultra Flush	DF-21-310	DF-28-380	21-374
Gerber	Ultra Flush	DF-21-312	DF-28-380	21-372
Gerber	Ultra Flush	DF-21-314	DF-28-384	21-372
Gerber	Ultra Flush	DF-21-318	DF-28-380	21-377
Gerber	Ultra Flush	DF-21-324	DF-28-384	21-377
Gerber	Ultra Flush	DF-21-325	DF-28-380	21-375
Gerber	Ultra Flush	EF-21-302	EF-28-380	21-342
Gerber	Ultra Flush	EF-21-304	EF-28-384	21-342
Gerber	Ultra Flush	EF-21-310	EF-28-380	21-374
Gerber	Ultra Flush	EF-21-312	EF-28-380	21-372
Gerber	Ultra Flush	EF-21-314	EF-28-384	21-372
Gerber	Ultra Flush	EF-21-318	EF-28-380	21-377
Gerber	Ultra Flush	EF-21-324	EF-28-380	21-375
Gerber	Ultra Flush	EF-21-325	EF-28-380	21-375
Glacier Bay (a Home Depot brand)		331-725 (BT6001)		
Glacier Bay (a Home Depot brand)	Elongated HET	331-725	N2225T	N2225EB
Greentide	GT 6810H		666-2	
Greentide	GT 6810H-S		666-1	
Greentide	GT 6811H		666-2	
Greentide	GT 6811H-S		666-1	
Jacuzzi	Espres	EZ36959		
Kohler	Barrington	K-3652	K-4484	K-4327
Kohler	Cimarron	K-3609	K-4421	K-4309
Kohler	Cimarron EcoSmart	K-3496-HE	K-4634-HE	K-4286

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Brand Name	Model Name	Model Number		
Kohler	Escale	K-3588	K-4472	K-4308
Kohler	Fountainhead	K-3524		
Kohler	Highline Pressure Lite	K-3519	K-4484	K-4304
Kohler	Kelston	K-11453	K-4469	K-4306
Kohler	Persuade	K-3654	K-4419	K-4322
Kohler	Saile	K-3564		
Kohler	San Raphael Power Lite	K-3393		
Kohler	San Raphael Pressure Lite	K-3597		
Kohler	Wellworth Pressure Lite	K-3531	K-4484	K-4303
Mansfield	704 Prestigio	704		
Mansfield	EcoQuantum	144-119	119	144
Mansfield	EcoQuantum	146-119	119	146
Mansfield	EcoQuantum	147-119	119	147
Mansfield	EcoQuantum	148-119	119	148
Mansfield	EcoQuantum	149-119	119	149
Mansfield	Maverick 1.28	111-112	112	111
Mansfield	Quantum	144-153	153	144
Mansfield	QuantumOne	146-153	153	146
Mansfield	QuantumOne	147-153	153	147
Mansfield	QuantumOne	148-153	153	148
Mansfield	QuantumOne	149-153	153	149
Medyag	6810H			
Medyag	6810H-S			
Medyag	6811H			
Medyag	6811H-S			
Niagara	1.0 PA	N2310	N2310T	N2310B
Niagara	Eco-Logic		N2225EB	N2225T
Niagara	Eco-Logic		N2225RB	N2225T
OPS		T/X-6688	X-6688	T-6688
OPS		T/X-6688E	X-6688	T-6688E
OPS		T/X-6688H	X-6688	T-6688H
Pegasus (a Home Depot brand)	Cottage	840-565	N2228T	N2228B
ProFLO (a Ferguson brand)	HET Dual Flush ADA		PF9312	PF9303
ProFLO (a Ferguson brand)	HET Dual Flush EF		PF9312	PF9301
ProFLO (a Ferguson brand)	HET Dual Flush RF		PF9312	PF9300
ProFLO (a Ferguson brand)	HET Gravity Flush EF		PF9412	PF9401
ProFLO (a Ferguson brand)	HET Gravity Flush RF		PF9412	PF9400
ProFLO (a Ferguson brand)	HET Single Flush ADA		PF9412	PF9403

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Brand Name	Model Name	Model Number		
ProFLO (a Ferguson brand)	HET Single Flush EF		PF6112HE	PF6101HE
ProFLO (a Ferguson brand)	HET Single Flush EF		PF6212HE	PF6201HE
Quality Craft	Alexis HET	30013K	3003	3001
Quality Craft	Alexis HET Dual Flush	30014K	3004	3001
Seasons (a HD Supply brand)	Seasons		SE10039	SE10041
Seasons (a HD Supply brand)	Seasons		SE10039	SE10040
Seasons (a HD Supply brand)	Seasons	SE10042		
Sterling (a Kohler company)	Karsten EB	402028	402023	402026
Sterling (a Kohler company)	Karsten PB	402025	402023	402021
Sterling (a Kohler company)	Rockton EB	402027	402022	402026
Sterling (a Kohler company)	Rockton PB	402024	402022	402021
Sterling (a Kohler company)	Stanton	402040		
Tangshan Ayers Bath	Dofiny HET		UAT1302-AA	UAC1301BS-AA
TOTO	Aquia	CST414M	ST413M	CT414
TOTO	Aquia II	CST416M	ST416M	CT416
TOTO	Aquia III	CST464M	ST464M	CT464
TOTO	Aquia IIIUH	CST464MF	ST464M	CT464F
TOTO	EcoClayton	CST784EF	ST784E	C784EF
TOTO	EcoDartmouth	CST754EF	ST753E	C754EF
TOTO	EcoDrake	CST743E	ST743E	C743E
TOTO	EcoDrake	CST744E(G)	ST743E	C744E
TOTO	EcoDrake	CST744EL	ST743E	C744EL
TOTO	EcoGuinevere	MS974224CEF(G)		
TOTO	EcoNexus	CST794EF	ST794E	CT794EF
TOTO	EcoPromenade	CST423EF	ST423E	C423EF
TOTO	EcoPromenade	CST424EF(G)	ST423E	C424EF(G)
TOTO	EcoSupreme	MS863113E		
TOTO	EcoSupreme	MS864114E		
TOTO	EcoUltramax	MS853113E		
TOTO	EcoUltramax	MS854114E		
TOTO	EcoUltramax	MS854114EL		
TOTO	EcoWhitney	CST754EFN	ST754E	C754EF
TOTO	Gwyneth	CST454CEF(G)	ST454E	C454CEF(G)
TOTO	Gwyneth	MS604114CEF(G)		
TOTO	Neorest 550	MS980CMG		
Tynan	Avoca	4344	1344	0344
Tynan	Cascade ADA	4354	1312	0354

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Brand Name	Model Name		Model Number	
Tynan	Cascade EF	4353	1312	0353
Tynan	Cascade RF	4352	1312	0352
Tynan	Foyle	4345	1345	0345
Tynan	MacLair	4347	1342	0347
Tynan	MacLair EF	4343	1342	0343
Tynan	MacLair RF	4342	1342	0342
Tynan	Nore	4346	1346	0346
VitrA	Evergreen		5402	5195
VitrA	Evergreen		5402	5196
VitrA	Evergreen		5055	5074
VitrA	Evergreen		5055	5076
VitrA	Evergreen		5066	5065
Vortens	Dali	5928	5201	5101
Vortens	Delfos	3130	3130	3130
Vortens	Hurricane		3473	3140
Vortens	Hurricane EL		3473	3137
Vortens	Hurricane RF		3473	3213
Vortens	Loretto ADA		3475	3140
Vortens	Loretto EL		3475	3137
Vortens	Loretto RF		3475	3213
Vortens	Rhodas DF		3436	3123
Vortens	Tornado		3468	3138
Vortens	Tornado ADA		3468	3134
Vortens	Vienna ELX		3436	3113
Vortens	Vienna ELX		3420	3113
Vortens	Vienna RF		3436	3208
Vortens	Vienna RF		3420	3208
Vortens	Vienna Victory		3436	3209
Vortens	Vienna Victory		3420	3209
WaterRidge	Grace Dual Flush One Piece Toilet	C22055C	C520093	C540552
Zurn	EcoVantage Dual Flush Round Front Toilet	Z5577	Z5562- TNK	Z5575-BWL
Zurn	EcoVantage Dual Flush, Elongated Toilet	Z5572	Z5562- TNK	Z5570-BWL
Zurn	EcoVantage Dual Flush, Elongated, ADA Toilet	Z5562	Z5562- TNK	Z5560-BWL
Zurn	EcoVantage Elongated ADA Toilet	Z5561	Z5561- TNK	Z5560-BWL
Zurn	EcoVantage Elongated Toilet	Z5571	Z5561- TNK	Z5570-BWL
Zurn	EcoVantage Round Front Toilet	Z5576	Z5561- TNK	Z5575-BWL

Appendix E

Operational Control and Documentation

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Below is a series of actions that can be used to include GPP in product, service and facility acquisitions.

Purchase Orders. GPP requirements apply to all commodity purchases, including those made by purchase order. Useful forms for completing a purchase order include the Green Procurement Requirements Reference Sheet and the Recovered Material Determination Form (RMDF).

- The end user of the product will determine whether or not GPP applies to the purchase. The Green Procurement Requirements Reference Sheet aids in this process.
- The user provides Contracting with the GPP Statement or a similar memo or email statement if no GPP items are being acquired. The user should complete the RMDF if recycled-content CPG items on the EPA list are to be purchased. Other documentation (a memo or e-mail) should be provided to Contracting if USDA-designated biobased items, FEMP or Energy Star® energy-efficient items or FEMP Low Standby Power items are being purchased. Contracting should not establish the requirements documents for purchase orders without adequate GPP documentation.
- MCAS Miramar may conduct market research and discover that certain recycled-content CPG items are continually being exempted due to ongoing price, supply, or technical issues. “Blanket exemptions” can be established for specific products that are unable to meet EPA requirements as long as MCAS Miramar does not prohibit them, and the blanket exemptions are reviewed on an annual basis so as not to become outdated.

Government Purchase Cards (GPC). GPP requirements *do apply to GPC purchases* even though they are usually below the micro-purchase limit (less than \$2,500). The Green Procurement Requirements Reference Sheet is a useful tool when purchasing items with a GPC. This document is included in Appendix C.

- The end user of the product will work with the credit card holder to determine whether or not GPP applies to the purchase and identify products that meet GPP requirements. The Green Procurement Requirements Reference Sheet aids in this process.
- Note that, although the GPP requirements apply equally to micro-purchases and larger purchases, written determinations to justify a CPG exemption request are not required for micro-purchases, per Executive Order 13101.
- The GPC Purchasing Considerations and Guidelines Log is an optional form that can be used to document how GPP was considered by the purchaser. It documents whether or not the GPC purchase met applicable green procurement requirements and the rationale for choosing a non-compliant product.

For construction and services contracts, the following steps must be taken to ensure that GPP is successfully included in contracts for construction and services:

Step 1 – Determining if GPP Elements Are Applicable

First, all contracted projects are evaluated by the requiring organization to determine if any of the GPP program elements apply. The Green Procurement Requirements Reference Sheet (Appendix C) can assist with this evaluation.

- If the project or service contract has no GPP requirements, the requiring organization can document this using the GPP Statement or a similar memo. This shows that GPP has been considered and no further action is needed. The form should be included in the official contract file.
- If the project or service contract includes requirements for one or more of the recycled-content products on the CPG list, the RMDf can be used. It documents the CPG items that are required, states whether or not they meet EPA requirements and provides the justification for any exemptions that are being invoked.
- Additional documentation (a memo or e-mail) should be provided to Contracting if USDA-designated biobased items, FEMP or Energy Star® energy-efficient items or FEMP Low Standby Power items are required. Contracting should require adequate GPP documentation for all contracted actions.
- Military Construction Program (MILCON) projects are executed by a Design Agent, which is usually the Naval Facilities Engineering Command (NAVFAC). The GPP Statement, RMDf or equivalent forms supplied by the design agent will be used to identify GPP requirements that apply to the project. GPP and other Sustainable Development goals are included in the project's Construction Criteria Document or Requirements and Management Plan, along with the rest of the MCAS Miramar's technical requirements.

Step 2 – Development of the Performance Work Statement

Next, the requiring organization writes the specifications or Performance Work Statement (PWS) that will define the contractor's performance requirements.

- If an architectural-engineering (A-E) design contractor is to be used to develop construction project specifications, ensure that the selection criteria included in FAR 36.602-1 have been considered. Design Agents are responsible for including these criteria when choosing A-E firms to design MILCON projects.
- The project manager also includes GPP in the A-E firm's Statement of Work (SOW). Design Agent project managers must ensure this is done for MILCON projects. Per FAR 36.601-3: "For facility design contracts, the SOW shall require that the architect-engineer specify, in the construction design specifications, use of the maximum practicable amount of EPA-designated items consistent with the performance requirements, availability, price reasonableness, and cost-effectiveness. Where appropriate, the SOW shall require also the architect-engineer to consider energy conservation, P2 and waste reduction to the maximum extent practicable in developing the construction design specifications."

- When buying green, either write detailed specifications and scopes of work or use performance-based contracting. MCAS Miramar success stories are listed in Appendix F as excellent examples on the beneficial effects of the GPP.

Step 3 – Specifications/PWS Review

The requiring organization puts the draft construction specifications or service contract PWS out for review and comment. The Environmental Management Office (EMO) is included in the review process.

- If GPP specifications are required but have not been included, the EMO will identify the deficient sections and return the package for action. Green contract language for more than 600 products and services is included in EPA's EPP Database and can be added to specifications and PWS.
- Design Agents are responsible for including appropriate GPP requirements in MILCON specifications. Civil Engineering and the EMO must review the specifications with this in mind and identify any discrepancies to the Design Agent's project manager. DoD Guide specifications are available from the *Construction Criteria Base on the WBDG website*; these Guide specs have been updated to include EPA recycled content requirements, but may not yet contain all required language for other GPP program elements.

Tips for Creating “Green” Contracts:

- Clearly identify all GPP products to be used
- Use appropriate documentation (i.e. GPP Statement or RMDF)
- When buying green, either write detailed specifications and scopes of work or use performance-based contracting
- Write specific requirements for recycled content, biobased content, energy and water efficiency, etc. into all applicable sections of the service contract PWS or the construction specifications

When detailed specifications are prepared instead of performance specifications, a general statement will be added to the contract stating that they will comply with meeting the GPP goals (or comply with purchasing green products). Success at meeting GPP requirements is much more likely if a little more effort is made. Review the service contract or project design in detail, identify all of the GPP products to be used, and write specific requirements for recycled content, biobased content, energy and water efficiency, low-VOC, non-ODS, P2 and EPP into all applicable sections of the service contract PWS or the construction specifications. For example, if the project requires concrete, insulation, and latex paint, make sure that each of the specification sections for these products describes the recycled-content requirements. Here is an example of language that might appear in the section for building insulation:

Provide fiberglass insulation with recovered material content, minimum 20 to 25% percent by weight, of glass cullet. Provide foam sealant with recovered material content, minimum 5% by weight.

Alternatively, products that comply with EPA minimum content requirements could be specified by “brand name or equal”. This means the contractor can supply the product by brand name as

stated in the specifications, or provide an equivalent product. This approach is more difficult to manage because:

- It does not clearly state the requirement for a recycled-content product in every specification section that includes the use of a Guideline item;
- The construction contractor is not likely to be aware of the requirement, nor consider it when proposing an “equivalent” product; and
- It requires the project engineer to remember that a Guideline item is involved, and review all submittals for equivalent products to ensure they have the required recycled content.

Step 4 – Solicitation Package and FAR Requirements

The final solicitation package is submitted to Contracting to become part of the contract. Contracting reviews the package, resolves any issues with the requiring organization, adds the required contract clauses and provisions, and awards the contract. For MILCON projects, the Design Agent provides the contracting officer:

- FAR provision 52.223-4, Recovered Material Certification, is inserted in all contracts (regardless of the contract value) that are for, or specify the use of, EPA-designated items. It is used regardless of the contract value and states that the vendor certifies, by signing their bid document, that the percentage of EPA-designated items to be used in the performance of the contract will be at least the amount required by the applicable contract specifications.
- FAR clause 52.223-10, Waste Reduction Program, is added to contracts to promote cost-effective recycling, waste prevention and waste reduction. “Waste prevention” means any change in the design, manufacturing, purchase, or use of materials or products (including packaging) to reduce their amount or toxicity before they are discarded. Waste prevention also refers to the reuse of products or materials. “Waste reduction” means preventing or decreasing the amount of waste being generated through waste prevention, recycling, or purchasing recycled and environmentally preferable products.
- If the project exceeds \$100,000 in value and EPA-designated CPG items are included in the contract, Contracting inserts FAR clause 52.223-9, *Estimate of Percentage of Recovered Material Content for EPA Designated Products*, which requires the contractor to *estimate* the percentage of recovered material content that will be used in a particular product; specifically identifying the percentage of post-consumer waste and other EPA-designated items that are in the product. *Alternate 1* of this clause requires the contractor to *certify* that the percentage of recovered content used in the performance of the contract will be at least the amount required by the solicitation or invitation for bid. The Alternate to the clause is only used when the CE project manager is technically able to *verify* the contractor’s submittal.
- Federal supply sources such as GSA, the Government Printing Office, and DLA have established their own estimation, certification, and verification procedures for CPG items. Agencies buying designated items through GSA, the Government Printing Office, and DLA, are not required to conduct independent estimation, certification, and verification procedures, as they have established their own procedures for CPG items.

Step 5 – Contract Performance and Reporting

The last stage is contract performance. Quality assurance is used to ensure that the GPP requirements in the contract are being acted upon. If the contract includes the clause requiring contractors to *estimate* or *certify* their recycled-content purchases, the project manager *verifies* the contractor's claims.

- Engineering provides supervisory Quality Assurance Evaluator (QAE) support for MILCON projects, and includes GPP compliance in their inspections. Any deficiencies are identified to the Design Agent's project manager for correction.
- Contract changes made during project execution shall not be allowed to circumvent mandatory GPP requirements. The project manager must review and approve all product substitutions for GPP compliance prior to use. Any additional exemptions that are required during execution of the project will be submitted to Contracting using an amended RMDF by MCAS Miramar requesting the change. For example, if CE were to determine that different products are required or an unforeseen exemption is going to be needed, then it would be responsible for amending the RMDF and submitting it to Contracting. If the contractor were to initiate the change, the responsibility would be theirs and Contracting would forward the amended RMDF to the responsible CE organization for approval. For MILCON projects, any additional exemptions that are required during execution of the project should be documented by the Design Agent's project manager in an amended RMDF (or equivalent form) and submitted to the Design Agent's contracting officer, who will forward the amended form to Civil Engineering for approval.
- If the project exceeds \$100,000 in value and FAR 52.223-9 is included, the contractor must estimate the amount of recycled material that was used in the project and provide the estimate as an official submittal to Contracting. When the clause's *Alternate I* is included, the contractor must also provide certification in the form of a label on the product or a statement verified by the vendor and attached to the bid documents. Measurement of recovered material content should be made in accordance with standard industry practice. The certification on multi-component or multi-material products must verify the percentage of post-consumer waste and recycled material contained in the major constituents of the product. Contracting forwards all certification submittals to the responsible project manager for verification.
- The contractor's recycled material estimates and certifications are verified by the CE project manager or QAE. For construction contracts, the CE project manager will verify the accuracy of the contractor's submittal. For service contracts, the QAE will verify compliance during the quality reviews.
- There is currently no DON requirement to "roll up" the data from these contractor submittals for reporting to higher headquarters. However, the data is useful to the MCAS Miramar GPT as an indicator of success or opportunities for improvement.
- All MILCON projects exceed \$100,000 in value. Accordingly, the Design Agent must require the construction contractor to estimate the amount of recycled material in use on

the project and provide the estimate as an official submittal to its contracting office, who will then forward the estimate to Civil Engineering for verification.

Some projects are submitted to the MCAS Miramar contracting office by organizations other than Civil Engineering. A similar process should be used to include GPP requirements in these contracts.

- The RMDF can be used to initiate the GPP process. Contracting will check to make sure appropriate documentation is provided for all non-CE contracted projects. Completed forms must be provided to Contracting prior to contract award.
- MCAS Miramar has designated QAEs to perform the associated contract quality assurance function. The designated QAEs will ensure proper completion of the appropriate forms and that the specified materials have been used on the project.
- At other times, MCAS Miramar may elect to use a non-MCAS Miramar level contracting office (e.g., GSA or NAVFAC) to award and administer a contract.
- In such cases, the RMDF can be used to initiate the GPP process. MCAS Miramar is responsible for completing the form. Completed forms should be incorporated by the selected contracting office into the contract language and maintained in the contract files.
- Follow normal protocols for specification development and for contract management and inspections. Be sure to include GPP requirements at every step. Any CPG exemptions that are required during execution of the project will be documented by the initiator of the change (MCAS Miramar or contractor) in an amended RMDF and submitted to the selected contracting office.

GPP also applies to all projects that are accomplished in-house by Civil Engineering Operations or other MCAS Miramar organizations. The RMDF or GPP Statement forms can be used to include green procurement in projects that will not be contracted.

- All work orders greater than \$3,000 must go through the DON review and approval process. The environmental representative will ensure the requesting organization provides an appropriate GPP form for all work orders to be completed in-house. Once the in-house work order is finalized, it is forwarded to the applicable shop for project completion. The GPP form is maintained in the work order file once the in-house work order is finalized and the project completed.
- The GPP form will also be forwarded along with the work order Bill of Material (BOM) to CE Materiel Control, who procures supplies for the work order. No supplies should be procured if a GPP form is not included with the BOM. Materiel Control reviews the GPP form and provides appropriate products. If the need for additional exemptions is identified at this time, Materiel Control will amend the RMDF and place it in the work order file.
- CE Operations will review work order files to ensure proper completion of the appropriate form and that the specified materials have been used on the project.

- For Work Orders, Job Orders, and Preventative Maintenance under \$2,500, the individual shop tasked with completing the project will complete the RMDF or GPP Statement. CE Operations will provide engineering assistance, if necessary. The completed form will be forwarded along with the BOM to Materiel Control and when complete, will be maintained in the project file. Work order supplies should not be procured unless one of the two completed forms is included with the BOM. If any exemptions are required during procurement of project supplies, shop personnel will amend the RMDF and place it in the project file. QAEs will review project files to ensure proper completion of the appropriate form and that the specified materials have been used on the project.

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Recovered Materials Determination Form

Instructions:

The procurement request originator completes this form when EPA-designated recovered content items are procured from vendors not on a GSA schedule or when a GSA schedule is not used. *This form is not required for items requisitioned from established Federal supply sources.*

1. The procurement request originator or purchase cardholder identifies the item(s) being purchased, signs and date the bottom of the form.
2. The completed form becomes part of the official contract file.

Procurement Request No. _____

Purchase Card Action Date _____ Vendor _____

The statement of work and specifications covering this procurement request are subject to the Defense Logistics Agency's Affirmative Procurement Program. The items being procured are: (Check category and circle appropriate item)

_____ Paper and Paper Products (commercial/industrial sanitary tissue products, miscellaneous papers, newsprint, paperboard and packaging products, printing and writing papers)

_____ Vehicular Products (coolants, re-refined lubricating oils, retread tires, rebuilt vehicle parts)

_____ Construction Products (Building insulation, Carpet, Carpet cushion, Cement/Concrete containing granulated blast furnace slag/fly ash, Reprocessed latex paint, Floor tiles, Flowable fill, Laminated paperboard, Modular threshold ramps, Non-pressure pipe, Patio blocks, Railroad grade crossing surfaces, Shower and restroom dividers/partitions, Structural fiberboard)

_____ Transportation Products (Channelizers, Delineators, Flexible delineators, Parking stops, Traffic barricades, Traffic cones)

_____ Park and Recreation Products (Park benches and picnic tables, Playground surfaces and equipment, Running tracks, Plastic fencing)

_____ Landscaping Products (Garden and soaker hoses, Hydraulic mulch, Plastic lumber landscaping timbers and posts, Lawn and garden edging, Compost from yard trimmings)

_____ Non Paper Office Products (Binders, clipboards, file folders, clip portfolios and presentation folders, Office furniture, Office recycling containers, Waste receptacles, Plastic desktop accessories, Plastic envelopes, Plastic trash bags, Printer ribbons, Remanufactured toner cartridges)

_____ Miscellaneous Products (Awards and plaques, Bike racks, Blasting grit, Industrial drums, Mats, Pallets, Signage, Sorbents, Manual-grade strapping)

I hereby certify the Statement of Work/Specifications for the requisition of materials/services listed above complies with EPA Comprehensive Procurement Guidelines for minimum recovered/recycled material content levels.

Procurement Request Originator's Signature

Date

Purchase Cardholder' Signature

Date

Request for Waiver or Exception

Instructions:

Complete this form when preferred procurement products or services **are not** procured. (These include EPA-designated, recovered-content, biobased, or energy efficient products).

1. The procurement request originator/purchase cardholder or contracting officer checks the appropriate justification(s), provides a written explanation, and signs and dates the form.
2. The original completed form becomes part of the contract file.
3. The procurement request originator submits a copy of the form to the field activity's designated Environmental Coordinator.
4. The Supply Division Supervisor forwards a copy of each Request for Waiver form to DES-E within 30 days.

Attach additional pages, if necessary.

Name of Product or Service: _____

Stock Number or Description: _____

Purchase Request Number: _____

Method of Purchase: _____ Date: _____

Vendor or Source: _____

Applicable Exception (check one):

Availability (not available within a reasonable period of time)

Date needed: _____ Date available: _____

Performance (fails to meet performance standard in the specifications)

Describe the standard and what is needed: _____

Describe how the guideline item fails to meet the standard: _____

____ Price (only available at unreasonable cost, taking life cycle energy costs into account)

Price of preferred product/service: _____

Price of non-preferred product/service: _____

____ Limited sources (not available from 2 or more sources)

Market research was performed by contacting ____ (insert number) vendors, but only _____ (enter name) was able to supply the product or service.

This determination is made in accordance with FAR 23.203(A), 23.405(c).and/or 23.703 as applicable.

Technical OPR -- Signature and Office Symbol

Date

Concurrence – Contracting Officer

Date

Concurrence – Director
(For covered energy consuming products only)

Date

**Green Procurement Statement
MCAS MIRAMAR**

Project No. _____

Project Title _____

None of the products that I am specifying for procurement are listed on a mandatory environmental purchasing list, including:

- U.S. EPA Comprehensive Procurement Guidelines published at www.epa.gov/cpg/products.htm.
- USDA Biobased product listings published at www.biobased.oce.usda.gov/public/categories.cfm.
- Energy Star® product listings published at www.energystar.gov/products.
- FEMP Low Standby Power product listings published at <http://oahu.lbl.gov/>

Therefore, I am not required to include the MCAS Miramar Recovered Material Determination Form with this procurement package.

In addition, I have sought to reduce the environmental damages associated with this procurement by considering the specification of environmentally preferable products and services to the extent feasible, consistent with price, performance, availability, and safety considerations. I have considered products with recycled or biobased content as well as other environmentally preferable attributes, such as:

- Reduced packaging;
- Durability and repairability;
- Reduced toxicity;
- Conservation of natural resources;
- Water conservation;
- Low Volatile Organic Compound (VOC) Content; and/or
- Asbestos alternative.

Signature: _____ Date: _____

Name (Print): _____

Title/Role: _____

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GCPC Checklist for Purchases

<u>GCPC CHECKLIST FOR PURCHASES</u>		02/13/08
<u>CARDHOLDER REVIEW</u>		
1. Purchase File Documentation:		
A. <u>PRIOR TO PURCHASE</u>		
a. Fully Funded Document: (The DD 1149, SF182, or other document will contain the following: Qty, Nomenclature, LOA, Fund Manager's signature & Dt, and UP/ExtP/TP.)	Yes []	No []
b. Have all Priorities of Govt Supply Sources been screened (FAR Part 8): (For Example: Supply Office, Property Office, CMSC, FMD, DRMO, Hazmat, CVIC, JWOD, DAPS, Prime Vendors, VA – Medical.)	Yes []	No []
c. 508 Compliant, Approvals, waivers attached:	Yes []	No []
d. Special Approvals, waivers as required:	Yes []	No []
e. Name of Vendor Selected: _____		
f. Did CH verify that vendor does take the GCPC card,		
g. Did CH inform Vendor this is a Government Purchase and not to add Tax / nor Shipping	Yes []	No []
h. Did the CH verify with the Vendor that they process the transaction, that no third party payment are allowed (I.e. PayPal)	Yes []	No []
B. <u>POST PURCHASE</u>		
1. Vendor Receipts, shipping docs, etc:	Yes []	No []
2. Report of Property (or service) Received (RPR) by customer after final receipt of order: (Date, printed name and signature)	Yes []	No []
3. Is this accountable property of \$300.00 or considered to be a "pilferable" item? If yes, item must be recorded in accountable property log	Yes []	No []
2. Purchase Log:		
a. What is the Call number: _____		
b. Is the Call number on required documentation: (For audit purposes)	Yes []	No []
c. Is the Purchase Log entry complete: (Call #, Dt of Purchase, Vendor Name, Type of Goods/Svc, Authorized Amnt, Final Amnt, RPR dt, St dt.)	Yes []	No []
3. Pre-Certification Checklist:		
a. Is Call Number identified per transaction on SOA:	Yes []	No []
b. Is transaction amount correct: (If no, document and follow up as necessary.)	Yes []	No []
c. Is this a disputable transaction: (If yes, document action taken, follow up until resolved.)	Yes []	No []
d. Did the AO reconcile and certify: (If yes, explain why on documentation sheet.)	Yes []	No []
4. Destruction Date on Purchase File:	Yes []	No []
5. Reconciliation & Certification Completed by Cardholder: _____		
	CH Signature	Date
<u>APPROVING OFFICIAL REVIEW:</u>		
1. Is the purchase appropriate and the charges accurate: (If no, document action taken)	Yes []	No []
2. Does the file contain required documentation:	Yes []	No []
3. Have you reviewed this purchase file, CH call log, and CH SOA:	Yes []	No []
4. Has the CH provided documentation of Disputed Items to AO:	Yes []	N/A []
5. Reconciliation & Certification Completed by AO:	Yes []	N/A []
6. AO has verified that Report of Property Received has been signed.	_____	_____
	AO Signature:	Date

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Federal Acquisition Regulation Recovered Material Certification

The following FAR provisions, "Recovered Material Certification" (52.223-4) and "Estimate of Percentage of Recovered Material Content for EPA-Designated Products" (52.223-9), shall be inserted into solicitations having specifications requiring the use and/or procurement of recovered materials.

Recovered Material Certification (October 1997):

As required by the RCRA of 1976 (42 U.S.C. 6962(c)(3)(A)(i)), the offeror certifies, by signing this offer, that the percentage of recovered materials to be used in the performance of the contract will be at least the amount required by the applicable contract specifications. (End of Provision)

Estimate of Percentage of Recovered Material Content for EPA-Designated Products (Aug 2000):

(a) Definitions. As used in this clause -

"Postconsumer material" means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of "recovered material."

"Recovered material" means waste materials and by-products recovered or diverted from solid waste, but the term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process.

(b) The Contractor, on completion of this contract, shall -

(2) Submit this estimate to _____ [Contracting Officer complete in accordance with agency procedures].

(End of clause)

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Appendix F

MCAS Miramar GPP Success Stories

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There are numerous projects currently underway or proposed for efficient energy and water management at MCAS Miramar. This section will briefly discuss these projects and the overall energy and water efficient benefits provided to MCAS Miramar.

MCAS Miramar received the SECNAV 2009 award for best Marine Corps Large Installation - Energy and Water Management.

Efficient Energy Management

The current baseline for MCAS Miramar's power usage is approximately 55,000 mega-watt-hours (MWH), with a base load of 6 mega-watts (MW) of power. The load profile ranges from 4 MW during holidays when the base population is low, to 18 MW during peak times. The goal of the *MCAS Miramar Green and Net Zero Plan* is to produce enough power on site to equal the average power usage and become net zero. This will be accomplished by using the following resources:

- Power Purchase Agreement (PPA)
- American Recovery and Reinvestment Act of 2009 (Stimulus Package)
- Energy Conservation Investment Program (ECIP)
- Energy Investment Program (EIP)
- Energy Saving Performance Contracting (ESPC)

Some of the larger energy efficient projects that are currently underway or proposed that will assist in achieving the goal of net zero include, but are not limited to:

- Landfill power – Currently, a landfill is on MCAS Miramar property and is managed by the City of San Diego. Plans are underway to capture methane gas and convert it into electricity. This would provide an estimated 25,000 MWH of renewable power.
- Solar electrical generation – Numerous solar electrical generation projects are underway at MCAS Miramar.
 - Photovoltaics (PV) carports – 15,000 ft² carport structure equipped with solar panels would produce 120 kilowatts (KW) of renewable power.
 - Building 7209 – 180,000 ft² general warehouse that will be equipped with a roof-mounted PV system with a peak power generation capacity of 400 KW. This will offset the entire electrical load in the building. The system will also be grid-connected, and can offset a portion of the station's peak demand.
 - Building 8630 – MCAS Miramar's HQ building will be equipped with 20,000 ft² of PV panels on a carport, which would provide an estimated 160 KW (100% of the building's demand). Powering the station headquarters with renewable energy sends a clear "leadership by example" message.
 - Building 6311 – MCAS Miramar's Installations & Logistics (I&L) offices will be equipped with a roof-mounted PV system with a peak power generation capacity of 60KW, which would also offset 100% of the building's demand.
 - Solar-powered parking lot lights – this will provide renewable energy to offset the power usage of lighting parking lots and recreational areas.

MCAS Miramar Final Green Procurement Program Plan

- Heating and hot water boiler replacements – Replacing domestic hot water (DHW) tanks and/or using a hybrid approach with commercial grade “tankless” water heaters. Also, installing solar thermal arrays that are connected to the hot water tanks will offset the natural gas usage base-wide.

Once these projects, along with other electrical generation projects including combined heat and power units, HVAC and building retrofits have been implemented, MCAS Miramar is set to meet energy efficiency goals of EO 13423, and are well on their way to meeting the net zero goal.

Efficient Water Management

MCAS Miramar also has a Resource Stewardship Plan that outlines numerous projects that will provide water efficient processes and assist in meeting EO 13423’s water efficiency goals. They include:

- Converting MCAS Miramar’s irrigation from using drinking water to recycled water, providing water conservation through using reclaimed water. Other uses of recycled water at MCAS Miramar include:
 - Dual Plumbing New Buildings
 - Street Cleaning
 - Construction Dust Control
- Other projects designed to reduce water consumption at MCAS Miramar include:
 - Installation of artificial turf for the baseball and soccer fields, reducing the amount water needed for irrigated those areas.
 - Eco-conscious landscaping designs including xeriscaping, incorporates plants that require less supplemental irrigation and landscape designs that minimize loss of storm water runoff.

Over the last two years, MCAS Miramar has saved over 48,000,000 gallons of drinking water by implementing these projects.

Resource Stewardship

Another MCAS Miramar success story includes a partnership with the San Diego Zoo to grow vegetation for animal feed (called “browse”) at various areas around MCAS Miramar. The browse would replace existing landscaping and require no additional irrigation. This partnership has already been written up in the Zoo’s monthly newsletter, raising community awareness of our sustainable landscaping.

Appendix G

GPP Management Assessment and Metrics

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MCAS Miramar GPP Management Assessment Form

Assessing your GPP

MCAS Miramar GPT can utilize the questionnaire below to assess the MCAS Miramar GPP.

Policy:

Does the organization have policy specifically requiring a GPP, and compliance with all the requirements of all components of the Federal green procurement preference program?

Planning:

- Has the organization established objectives/targets for GPP performance (purchases of green products and services) that are consistent with the nature and quantity of purchasing activities?
- Does the organization have written procedures for setting, tracking, and updating objectives and targets?
- Are documented procedures in-place to achieve these objectives and targets?
- Have responsibilities been determined and documented?
- Has accountability been established through inclusion of GPP responsibilities in job descriptions and performance standards of key players?

Implementation and Operation:

- Is the organization's GPP awareness training program tailored specifically to the nature and quantity of purchases typically made by the organization?
- Does the organization's GPP assign responsibility for implementation of the GPP awareness training program to a specific person/office?
- Does the GPP awareness training program provide initial and refresher training to all personnel involved with preparation of specifications/statements of work, purchases with government credit cards, contracting/ procurement?
- Does the organization have a documented process for tracking initial and refresher training for all personnel involved in the procurement process?
- Does the organization have documented procedures to ensure green procurement opportunities are identified for each purchasing action?
- Does the organization have documented procedures to ensure green products or services are purchased preferentially in each purchasing action?
- Does the organization have documented procedures to ensure that the relevant green procurement contract language and FAR clauses are incorporated in all contracts?
- Does the organization have documented procedures to ensure that the green procurement requirements are executed in accordance with contract requirements and that such execution is verified?
- Does the organization have documented procedures for justifying and granting approval for decisions not to purchase EPA- and USDA-designated items with recovered material or biobased content and energy efficient products designated by Energy Star® / DoE?

Checking and Corrective Action:

- Does the organization's GPP have procedures and assign responsibility for routine measurement, evaluation, and reporting of GPP performance data?
- Does the organization's GPP require routine self-assessments of the effectiveness of awareness training and the completeness and integrity of GPP performance data?
- Has the organization incorporated GPP requirements into self-assessments, compliance inspection protocols, and management system audit protocols?
- Do the organization's inspection protocols include evaluations of GPP awareness training, performance measurement, and responsibility/accountability?
- Do the organization's self-assessment, compliance inspections, and management system audit procedures include requirements for follow-up action and documented closure of deficiencies in GPP?

Management Review:

- Does the organization's GPP include a management review process?
- Does the management review process provide facility senior leadership with accurate and timely data regarding the organization's GPP performance?
- Does the management review process include provisions for feedback and policy changes to ensure continuous improvement in GPP performance?
- Does the management review process require documentation, tracking, and closure of actions resulting from the review process?

DoD Green Procurement Metrics

The OSD, DoD Components, and individual procuring organizations will guide and measure progress toward the DoD goal of 100 percent Compliance with Federal green procurement mandates with the following tools and criteria:

1. The Codes in the CAR (or successor data capture report), using data from the Federal Procurement Data System-Next Generation (or successor system).
2. Purchases of Federally-defined indicator items as determined using data from Defense Logistics Agency's GPR/ERLS at Defense Logistics Information Service (DLIS).
3. Personnel trained in green procurement using data from the Defense Acquisition University's training information database.
4. Organizations participating in the FEC.
5. Number of negative contract audit findings that indicate lack of compliance with GPP requirements.

OSD and the DoD Components will review and monitor green procurement performance trends using the following metrics:

1. Percent reduction in the number of "Not Required" codes in Use of EPA-Designated Products field in CAR (or corresponding fields in successor data capture system), and percent increase in the number of "Meets Requirements" codes in Use of EPA-Designated Products field in CAR (or corresponding fields in successor data capture system).
2. Increase in the purchases of Federally-defined indicator items.
3. Increase in the percentage of personnel trained in green procurement.
4. Increase in organizations or installations participating in the FEC.
5. Decrease in contract audit findings indicating lack of compliance with GPP requirements.

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Appendix H

How to Register for GPP Training on the GoLearn Website

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The Gov Online Learning Center is located at www.golearn.gov.

Registering in the Gov Online Learning Center

If this is the first time taking a course at the Gov Online Learning Center, you must first register in the system. When you register, select “Defense” for Organization and “Department of the Navy” for Agency for the Division field type in your functional role, (i.e. Contracting, Civil Engineering). Registering in this manner will enable OPM to send functional specific training data to the DON to comply with DoD training metrics.

To receive an approved account, a user must submit a *GoLearn purchase form*. In addition, users must locate the online “account request” link located on the www.GoLearn.gov homepage in order to submit their account information.

NOTE: As of 7/1/2006, the GoLearn.gov site became 100% fee for service. No users (federal employees included) will be awarded an approved account without following the instructions above. For technical assistance, contact the GoLearn helpdesk at (888) 661-2252 or golearn@geolearning.com.

Registering for the Green Procurement Course

To register for the Green procurement course, you should first log on with your email and password (located at the top banner of the GoLearn site). Next, click on the *Full Catalog* button on the top navigation bar, you will see the first page of the Catalog. Click on the *Free Catalog* category and select the *Legislatively Mandated and Agency Required Topics* category. Then choose the following by clicking on its title: **What is “Green” Purchasing, Anyway?** (Course ID OPM008)

After you have clicked on the course title, hit the register button. You will then see 2 multiple choice questions on the purpose and type of training. For the first question, you should select **Legislatively Mandated or Agency Required** and click the continue button. Answer the 2nd question as appropriate and hit the submit button. You are on your way to a great learning experience with the Gov Online Learning Center.

To Begin the Course

After you have registered for the course, click on the My Courses button on the top navigation bar. Courses you registered for are displayed. Select the **What is Green Procurement, Anyway?** course and begin the course.

Course Completion

Once you have successfully completed the course, you will be able to print a completion certificate. To get your certificate, click on the *My Courses* button again. Each course will have a status (complete, incomplete or not attempted). When you have completed a course, there will be a green link that will take you to a certificate.

Continuous Learning Credit

Acquisition personnel receive 3 Continuous Learning (CL) credit points for completing this course. Personnel may use the web-based Acq Now CL tracker to document course completion and receive credit, <https://www.atrrs.army.mil/channels/acgnowcl/>.

Appendix I

Additional GPP Information

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Additional Training Resources for GPP

Green Procurement

Buying Green: A Multi-Functional Approach to Pollution Prevention

To order the manual or obtain more information on training offered by the DLA Training Center call (614) 692-5969, (800) 458-7903, (269) 961-7046, or fax (269) 961-7055.

Green Procurement Training

The U.S. Army Center for Health Promotion and Preventive Medicine offers onsite Green Procurement training at DoD facilities to credit card buyers, procurement request originators, and contracting personnel. Call (410) 436-5202 or visit chppm-www.apgea.army.mil/gswwp/greenpro.aspx.

DAU Contracting Courses: www.dau.mil.

Online course available from DAU: DAU Purchase Card Continuous Learning Module (click on CLG tab then CLG001): DAU Continuous Learning Module CLG001-DoD Government Purchase Card

DAU Green Purchasing Continuous Learning Module: (click on CLC tab then CLC046) DAU Continuous Learning Module CLC046-Green Procurement

OFEE GPP Training: ofee.gov/gp/training.asp

Federal Energy Management Program (FEMP)

FEMP Lights On-Line Training Course: www.femplights.com/

Related Training

Buy Recycled Training Manual 5th Edition: Contact Maryland Environmental Services, 2011 Commerce Park Drive, Annapolis, MD 21401 (410-974-7252)

Department of Energy Environmental Pollution Prevention Information Clearinghouse: www.hss.energy.gov/pp/archives/otherinfo.htm.

Additional Regulatory and Program Guidance

Below is a list of additional Federal and DoD regulatory and program guidance related to GPP.

Public Law 107-171

Known as the “Farm Bill,” this law establishes the USDA biobased product program. USDA designates biobased items for Federal agencies to purchase and provides recommendations for agencies purchasing these items with biobased content.

Section 6002 of the RCRA

RCRA Section 6002 requires the EPA to issue Comprehensive Procurement Guidelines (CPGs) that list designated items that are or can be made with recovered materials. It also established some of the fundamental requirements for recovered material procurement including applicability, acceptable exceptions, certifications and estimations, and exclusion of specifications for virgin materials.

Energy Policy Act (EPAcT) of 2005

The EPAcT is a comprehensive piece of legislation that covers numerous topics in the areas of energy and water conservation, alternative energy sources, reduction in fossil fuel use, and sustainable building design. It includes specific procurement requirements for energy efficient products and the increased use of cement/concrete with recovered mineral content.

Federal Acquisition Regulation (FAR)

FAR Subpart 23.2

This subpart prescribes policies and procedures for acquiring energy- and water-efficient products and services, and products that use renewable energy technology.

FAR Subpart 23.4

This subpart prescribes policies and procedures for acquiring Environmental Protection Agency (EPA)-designated products or U.S. Department of Agriculture (USDA)-designated items through AP programs required by the RCRA of 1976 and E.O. 13423.

FAR Subpart 23.7

This subpart prescribes policies and procedures for acquiring energy-efficient, water conserving, and environmentally preferable products and services.

40 CFR Part 247

The CPGs are published in 40 CFR Part 247 of the Federal Register. This part contains some general affirmative procurement requirements and the specific recycled content item designations.

Executive Order 13423

Consolidated and strengthened several “Greening the Government” E.O.s. This E.O. addresses vehicles, petroleum conservation, alternative fuels, energy efficiency, renewable power, sustainable building, water conservation, procurement, toxic chemicals, and electronics management. Procurement practices have a role in each of these areas. The implementing instructions also require increased solid waste diversion and maintenance of cost-effective waste prevention and recycling programs in all facilities.

Executive Order 13221

"Energy Efficient Standby Power Devices" – Requires Federal agencies to purchase products that use no more than one watt in their standby power consuming mode. DoE's FEMP program develops lists of recommended products that meet this requirement.

Executive Order 13150

"Federal Workforce Transportation" – Establishes programs providing incentives for Federal employees to use mass transportation and vanpools.

Section 314, 2003 National Defense Authorization Act

Tracking systems and training related to the procurement of environmentally preferable procurement items.

CPG Items

The EPA CPGs list 61 items which can be purchased with recycled content, such as paper and paper products, construction products, re-refined oil, etc. The Agency must require that 100 percent of purchases meet or exceed EPA's recycled content recommendations. A written justification/waiver is required for non-compliance.

Recovered Materials Advisory Notices (RMAN)

EPA issued RMANs provide purchasing guidance and recommend recovered and postconsumer material content levels for designated items. RMAN recommendations are guidance and therefore are not codified in the CFR. The RMANs recommend recycled-content ranges for CPG products based on current information on commercially available recycled-content products. RMAN levels are updated as marketplace conditions change.

Federal Green Construction Guide for Specifiers

The Federal Green Construction Guide for Specifiers was developed by EPA, the Federal Environmental Executive, and the Whole Building Design Guide, to help Federal building project managers meet mandates established by statute and E.O.s, as well as EPA and DoE program recommendations. The specifications reference several North American forest certification standards and other information pertinent to green construction.

GSA Products

GSA is one of the three central management agencies in the Federal Government. The goals are to avoid "senseless duplication, excess cost, and confusion in handling supplies," as well as to provide space for the Government to do its work. GSA provides a wealth of green supplies and services. Details may be found at GSA's environmental website.

Defense Logistics Agency (DLA)

The DLA procures common usage items for all military departments and DoD agencies. Their automated procurement system DoD Electronic MALL (DoD EMALL, <https://www.emall.dla.mil>) provides for a simple method by which green products may be acquired. DLA also operates a web based GPR tool (www.dlis.dla.mil/erlsqpr/).

USDA BioPreferred Program

The USDA BioPreferred program is a resource for producers of biobased products, military departments and DoD agencies required to purchase them, and others interested in renewable products. The program includes information on submitting products for designation, instructions on meeting requirements to purchase biobased materials, and many other useful topics.

Energy Star®

Energy Star® is a joint program of the EPA and the DoE helping to save money and protect the environment through energy efficient products and practices.

Federal Energy Management Program (FEMP)

The DoE's FEMP works to reduce the cost and environment impact of the Federal government by advancing energy efficiency and water conservation, promoting the use of distributed and renewable energy, and improving utility management decisions at Federal sites. Additionally, the FEMP provides information on how to buy products with low standby power.

Electronic Product Environmental Assessment Tool (EPEAT)

EPEAT is a system to help purchasers evaluate, compare and select desktop computers, notebooks, and monitors based on their environmental attributes. EPEAT also provides a clear and consistent set of performance criteria for the design of products, and provides an opportunity for manufacturers to secure market recognition for efforts to reduce the environmental impact of its products.

Applying GPP to Commodity Purchases

Purchase Orders. GPP requirements apply to all commodity purchases, including those made by purchase order.

1. The end user of the product, in consultation with MCAS Miramar Environmental Division, will determine whether or not GPP applies to the purchase. The Green Procurement Requirements Reference Sheet aids in this process.
2. The user provides Contracting with the GPP Statement, or a similar memo or e-mail statement if no GPP items are being acquired. The user should complete the RMDF if recycled-content CPG items on the EPA list are to be purchased. Other documentation (memo or e-mail) should be provided to Contracting if USDA-designated biobased items, FEMP or Energy Star® energy-efficient items, or FEMP Low Standby Power items are being purchased. Contracting should not establish the requirements documents for purchase orders without adequate GPP documentation.
3. MCAS Miramar may conduct market research and discover that certain recycled-content CPG items are continually being exempted due to ongoing price, supply, or technical issues. “Blanket exemptions” can be established for specific products that are unable to meet EPA requirements as long as your MAJCOM does not prohibit them, and the blanket exemptions are reviewed on an annual basis so as not to become outdated.

Government Purchase Cards. GPP requirements do apply to GPC purchases even though they are usually below the micropurchase limit (less than \$3,000).

1. The end user of the product will work with the credit card holder to determine whether or not GPP applies to the purchase, and identify products that meet GPP requirements. The Green Procurement Requirements Reference Sheet aids in this process.
2. Note that although the GPP requirements apply equally to micropurchases and larger purchases, written determinations to justify a CPG exemption request are not required for micropurchases, per EO 13101.

The GPC Purchasing Considerations and Guidelines Log is an optional form that can be used to document how GPP was considered by the purchaser. It documents whether or not the GPC purchase met applicable green purchasing requirements, and the rationale for choosing a non-compliant product.

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Appendix J

Acronyms and Abbreviations

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A-E	Architectural-Engineer
AFV	Alternative Fuel Vehicles
AP	Affirmative Procurement
APP	Affirmative Procurement Program
ATV	Advanced Technology Vehicles
BEES	Building for Environmental and Economic Sustainability
BOM	Bill of Material
CAA	Clean Air Act
CCR	Central Contractor Registration
CFC	Chlorofluorocarbons
CFR	Code of Federal Regulations
CL	Continuous Learning
CMC	Commandant of the Marine Corps
CNG	Compressed Natural Gas
CPG	Comprehensive Procurement Guidelines
COM	Commander
CONUS	Contiguous United States
COR	Contracting Officer's Representative
CPG	Comprehensive Procurement Guidelines
CTC	Closing the Circle
DAPS	Document Automation and Production Service
DAU	Defense Acquisition University
DENIX	Defense Environmental Network and Information eXchange
DeCA	Defense Commissary Agency
DESC	Defense Energy Support Center
DFARS	Defense Federal Acquisition Regulation Supplement
DLA	Defense Logistics Agency
DoD	Department of Defense
DoE	Department of Energy
DON	Department of Navy
DRMO	Defense Reutilization and Marketing Office
DSCR	Defense Supply Center Richmond
ECE	Environmental Compliance Evaluation
EMALL	DoD Electronic Mall
EMO	Environmental Management Office
EMS	Environmental Management System
ENAC	Environmental Attributes Code
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act
EPC	Environmental Protection Committee
EPCRA	Emergency Planning and Community Right to Know Act
EPEAT	Electronic Product Environmental Assessment Tool
EPP	Environmentally Preferable Products
EQA	Environmental Quality Assessment
ERLS	Environmental Reporting Logistics System
ESOHC	Environment, Safety, and Occupational Health Committee
FAR	Federal Acquisition Regulation

MCAS Miramar Final Green Procurement Program Plan

FEMP	Federal Energy Management Program
FFCA	Federal Facilities Compliance Act
FPDS	Federal Procurement Data System
FPDS-NG	Federal Procurement Data System- Next Generation
FSRIA	Farm Security and Rural Investment Act of 2002 (Farm Bill)
GoLearn	Government Online Learning Center
GCPC	Government-wide Commercial Purchase Card
GP	Green Procurement
GPC PM	Government Procurement Card Program Manager
GPC	Government Procurement Card
GPP	Green Procurement Program
GSA	General Services Administration
HQMC	Headquarters Marine Corps
IT	Information Technology
JWOD	Javits-Wagner-O'Day Program
LEED	Leadership in Energy and Environmental Design
MCCS	Marine Corps Community Services
MCO	Marine Corps Order
MILCON	Military Construction
MSDS	Materials Safety Data Sheet
NAVFAC	Naval Facilities Engineering Command
NAVSUP	Naval Supply Systems Command
NFESC	Naval Facilities Engineering Service Center
NIB	National Institute for the Blind
NISH	National Institute for the Severely Handicapped
NIST	National Institute of Standards and Technology
NMCAG	Navy Marine Corps Acquisition Guide
NMCAR	Navy Marine Corps Acquisition Regulation
NOV	Notice of Violation
OCONUS	Outside of the Contiguous United States
ODS	Ozone-Depleting Substances
OFEE	Office of the Federal Environmental Executive
OFPP	Office of Federal Procurement Policy
P2	Pollution Prevention
PCB	Polychlorinated Biphenyls
PM	Project Manager
PWO	Public Works Officer
PWS	Performance Work Statement
QAE	Quality Assurance Evaluator
RCRA	Resource Conservation Recovery Act
RMAN	Recovered Materials Advisory Notice
RMDF	Recovered Material Determination Form
SNAP	Significant New Alternatives Policy
SOW	Statement of Work
SW EDMWEB	Solid Waste Pollution Prevention Annual Data Summary
UNICOR	Federal Prison Industries, Incorporated
US	United States
USDA	United States Department of Agriculture
VOC	Volatile Organic Compound

Appendix K

Definitions

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Acquisition - the acquiring of supplies and services including construction, using appropriated funds, and for the use of the Federal government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, or demonstrated and evaluated. Acquisition begins when agency needs are established and includes the description of requirements to satisfy agency needs, solicitation, selection of sources, award of contracts, contract financing, contract performance, contract administration, and those technical and management functions directly related to the process of fulfilling agency needs by contract.

Activity/Installation - any Federal facility or organization that is formally accountable for compliance under environmental regulation or conducts activities that can have a significant impact on the environment, either directly or indirectly, individually or cumulatively, due to the operations of that facility's or organization's mission, processes or functions.

Affirmative Procurement - assuring CPG items composed of recovered materials (EPA-designated items) will be purchased to the maximum extent practicable, consistent with Federal law and procurement regulations.

Agency or Executive Agency - as defined in section 105 of title 5, United States Code (USC), excluding the Government Accountability Office. Military departments, as defined in section 102 of title 5, U.S.C. 102, are covered under the auspices of the DoD.

Biobased Product – a commercial or industrial product (other than food or feed) that uses biological products, or renewable domestic agricultural (plant, animal, and marine) or forestry materials. FSRIA mandated that USDA biobased products also be included in Federal Environmentally Preferable Products.

Certification - provided by offerors/bidders/vendors, written documentation certifying the percentage of recovered materials contained in products or to be used in the performance of the contract is at least the amount required by applicable specifications or other contractual requirements. Certification on multi-component or multi-material products should verify the percentage of post consumer waste and recovered material contained in the major constituents of the product.

Components of the Federal Green Procurement Program -

- Recovered materials (Affirmative Procurement),
- Energy efficient (FEMP, Energy Star®, EPEAT),
- Alternative fuels/AFVs,
- Biobased Products,
- Non-Ozone Depleting Substances, and
- Environmentally Preferable Products.

Comprehensive Procurement Guidelines - regulations issued by EPA pursuant to section 6002 of RCRA: (1) identifying items produced (or can be produced) with recovered materials and where procurement of such items will advance the objectives of RCRA; and (2) providing recommended practices for the procurement of such items.

Energy Efficient- measures, practices, or programs that reduce the energy used by specific devices and systems, typically without affecting the services provided. Such savings are generally achieved by substituting technically more advanced equipment or operating procedures to produce the same level of end-use services (e.g., lighting, heating, motor drive) with less energy input.

Environmental Management System - a set of processes and practices that enable an organization to increase its operating efficiency, continually improve overall environmental performance and better manage and reduce its environmental impacts, including those environmental aspects related to energy and transportation functions.

EMS implementation reflects accepted quality management principles based on the “Plan, Do, Check, Act,” model found in the ISO 14001:2004(E) International Standard and using a standard process to identify and prioritize current activities, establish goals, implement plans to meet the goals, evaluate progress, and make improvements to ensure continual improvement.

Environmentally Preferable - products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, product, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.

EPA-Designated Item - an item designated by the EPA in a Comprehensive Procurement Guideline and for which EPA recommended procurement practices, including recovered materials content levels, in a Recovered Materials Advisory Notice.

Green Procurement – purchase of products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution reuse, operation, maintenance or disposal of the product or service. Green Procurement is also known as Affirmative Procurement or Environmentally Preferable Procurement.

Green Products/Services - products and services meeting the requirements of one or more of the components of Federal green procurement preference programs: RCRA Section 6002; EO 13423, (including traditional Affirmative Procurement and Environmentally Preferable Products); Electronic Stewardship requirements; the Buy-Bio requirements of the 2002 Farm Bill (Public Law 107-171); and any Federal procurement preference programs implemented after the date of this document.

Life-Cycle Cost – in accordance with E.O. 13423, “life-cycle costs” means the sum of the present values of investment costs, capital costs, installation costs, energy costs, operating costs, maintenance.

Ozone-Depleting Substances – any chemical listed as a Class I or Class I substance as defined by the CAA and 40 CFR 82. Class I ODSs most prevalent in Navy applications include CFC-11, CFC-12, CFC-113, CFC-114, Halon 1211, Halon 1301, methylchloroform (1,1,1, trichloroethane) and carbon tetrachloride. Class II ODS most prevalent in Navy applications include: HCFC-22, HCFC-123, and HCFC-14b. CFCs and HCFCs are commonly referred to as Freons. While production of Class I ODS has ceased, production phase-outs of Class II ODS will begin over the next several years.

Pollution Prevention - “source reduction” as defined in the Pollution Prevention Act of 1990 (42 U.S.C. 13102), and other practices that reduce or eliminate the creation of pollutants through (a) increased efficiency in the use of raw materials, energy, water, or other resources, or (b) the protection of natural resources by conservation.

Practicable - capable of performing in accordance with applicable specifications, available at a reasonable price and within a reasonable period of time, while maintaining a satisfactory level of competition with other products.

Preference - when two products or services are equal in performance characteristics and price, the Government, in making purchasing decisions, will favor the more environmentally-sound or energy-efficient product.

Recovered Material - waste materials and by-products recovered or diverted from solid waste, excluding those materials and by-products generated from, and commonly reused within, an original manufacturing process.

Recycled Material – Previously used materials, substitutable for a raw or source material in the manufacturing process. If not so used, this material would become waste.

Recycling – Using, reusing, or reclaiming materials; this includes processes that regenerate a material or recover a useable product from it.

Renewable Energy - energy produced by solar, wind, biomass, landfill gas, ocean (including tidal, wave, current, and thermal), geothermal, municipal solid waste, or new hydroelectric generation capacity achieved from increased efficiency or additions of new capacity at an existing hydroelectric project.

Solid Waste - garbage, refuse, sludges, and other discarded solid materials, including those from industrial, commercial, and agricultural operations, and from community activities. This excludes solids or dissolved materials in domestic sewage or other significant pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents, dissolved materials in irrigation return flow, etc.

Specification - a clear and accurate description of the technical requirements for materials, products, or services including the minimum requirement for materials' quality and construction and any equipment necessary for an acceptable product. In general, specifications are in the form of written descriptions, drawings, prints, commercial designations, industry standards, and other descriptive references.

Sustainable – of or pertaining to creating and maintaining conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations of Americans.

Unreasonable Price - The price of a recycled-content product is considered unreasonable if it significantly exceeds the cost of a comparable non-recycled item.
(See life cycle cost definition above)

Verification - procedures used by procuring agencies to confirm both vendor estimates and certifications of the percentages of recovered material contained in the products supplied to them or to be used in the performance of a contract.

Waste Prevention - any change in the design, manufacturing, purchase, or use of materials or products, including packaging, to reduce their amount or toxicity before they are discarded. Waste prevention also refers to the reuse of products or materials.

Waste Reduction – prevention or decreasing the amount of waste being generated through waste prevention, recycling or purchasing recycled and environmental preferable products.