

ENVIRONMENTALLY PREFERABLE PURCHASING IMPLEMENTATION GUIDANCE FOR THE MODEL POLICY*

Prepared by StopWaste

This *Implementation Guidance* is a supplement to the *Environmentally Preferable Purchasing Model Policy*, also prepared by StopWaste. It provides additional information for purchasers on selected sections of the *Model Policy* to help write specifications, evaluate products and services, and further implement the *Policy*. For example, websites and other information for additional resources are provided for regulations and strategies referenced in the *Model Policy*.

For ease in cross-referencing, the sections numbered below correspond to the numbering in the *Model Policy*. Included are the following:

- Section 3: Strategies for Implementation for Source Reduction, Recycled Content Products, Energy Efficient and Water Saving Products, Green Building Products and Practices, Landscaping Products and Practices, Toxics and Pollution Prevention Products and Practices, and Bio-Based Products.
- Section 5: Implementation.
- Section 6: Program Evaluation.

Definitions are also provided for new terms or references in this *Implementation Guidance*.

If you have questions, or need any assistance in either modifying the *Model Policy* for adoption by your organization or implementing any or all aspects of the *Policy*, please contact the StopWaste Environmentally Preferable Purchasing staff – Debra Kaufman at DKaufman@stopwaste.org or Rachel Balsley at RBalsley@stopwaste.org. You may also contact them by calling (510) 891-6500.

StopWaste has also prepared “*Guidelines for Buying Environmentally Preferable Products*” and several product-type specific environmentally preferable fact sheets to provide additional information in implementing environmentally preferable purchasing. These resources are all downloadable at www.StopWaste.org/EPP.

3.0 STRATEGIES FOR IMPLEMENTATION

3.1 Source Reduction

3.1.1 Certain practices and purchasing strategies can help prevent waste before it is created. Such practices are suggested whenever practicable and cost-effective, but are not meant to reduce workplace safety or compromise product performance. Many are expected to reduce costs incurred by the organization for labor and operations.

Examples include:

- electronic communication instead of printed,
- double-sided photocopying and printing,
- washable and reusable dishes and utensils,

***Note:** Please see *Environmentally Preferable Purchasing Model Policy, Updated Version June 2016* for policy language.

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- rechargeable batteries,
- streamlining and computerizing forms,
- “on-demand” printing of documents and reports as they are needed,
- leasing long-life products when service agreements support maintenance and repair rather than purchasing new products, such as carpets,
- sharing or renting equipment and occasional use items,
- choosing durable, well-made products rather than disposable,
- reducing product weight or thickness when effectiveness and/or integrity is not jeopardized in products such as, but not limited to, paper and plastic liner bags,
- buying in bulk, when storage and operations exist to support it,
- reusing products such as, but not limited to, file folders, storage boxes, office supplies, and furnishings.

For a guide with tips and tools to reduce paper use, see StopWaste’s “*Paperless Express*” at www.StopWaste.org/Paperless.

- 3.1.2 Some products can prevent waste by being “remanufactured” or refurbished into a newly usable product. Examples of some of these common products are toner cartridges, tires, furniture, equipment and automotive parts. When remanufactured, these products often cost less and perform comparably to new products. It is suggested that purchases of these types of products be made whenever practicable, as long as safety, performance and cost standards continue to be met.

For more information on purchasing remanufactured toner cartridges, see StopWaste’s Fact Sheet on “*Remanufactured Toner Cartridges in Alameda County*” at www.StopWaste.org/EPP.

- 3.1.3 Certain products may have a higher initial purchase cost, but may require less maintenance or long-term costs over the life of the product, so it is important that buyers consider short-term and long-term costs in comparing product alternatives, when feasible. This includes evaluation of total costs expected during the time a product is owned, including, but not limited to, acquisition, extended warranties, operation, supplies, maintenance, disposal costs and expected lifetime compared to other alternatives. Examples of products for which such cost comparisons can indicate significant differences between short- and long-term costs include, but are not limited to, janitorial towels and tissues (including installation and dispensing hardware), parking stops, park benches and tables, tools and power equipment, office equipment, software and vehicles.

This kind of comparison is sometimes referred to as “ownership costs” or “life cycle costs”. “Ownership costs” best describes the purpose of calculating the cost of owning the product during the purchased use time. “Life cycle costs” are more complex and not specifically required. It more accurately describes an analysis of the impacts of products from initial resource extraction, through production, use, and then through disposition after use. For example, to compare the costs of purchase and use of traditional concrete parking stops with recycled plastic parking stops, see StopWaste’s Fact Sheet on “*Environmentally Preferable Traffic Control Products in Alameda County*” at www.StopWaste.org/EPP.

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3.1.4 Equipment purchases can also be compatible with waste prevention goals and practices when practicable.

Examples include:

- copiers and printers capable of duplexing,
- battery-operated equipment capable of being recharged or using rechargeable batteries,
- dishwashing equipment, when washable and reusable dishes and utensils are practicable,
- bulk storage and operation.

For more information on using rechargeable batteries, see the StopWaste *Rechargeable Batteries Fact Sheet* at www.StopWaste.org/EPP.

3.1.8 Some electronic equipment has been found to contain toxic materials. In particular, the California Department of Toxic Substances Control ruled in 2001 that cathode ray tubes (CRTs) found in computer monitors and televisions are banned from California landfills to prevent the release of lead and must be properly reused or recycled. This has created an expected increased cost for safe and efficient collection and recovery of these items. Many large government and commercial purchasers of electronic equipment have responded by successfully requiring, in bid specifications, suppliers of electronic equipment to take back their equipment for reuse or environmentally safe recycling. The Silicon Valley Toxics Coalition website at svtc.org has information about the problems and their work for sustainability, accountability and cleaner production in the high-tech industry. See also the information and resources prepared by the Northwest Product Stewardship Council at www.productstewardship.net/products/electronics.

RecycleWhere? at www.StopWaste.Org/recycle is StopWaste's on-line database providing accurate information about recycling, reuse, and proper disposal options for residents and businesses. Listings can be looked up by material type for pick-up or drop-off locations.

3.1.13 As part of service contracts and performance guidelines, request that computer and electronic equipment maintenance staff or vendors set the default on all printers, copiers and other imaging equipment to energy and resource-efficient settings.

3.2 Recycled Content Products

3.2.1 Purchasing products that contain recycled content, particularly postconsumer not just pre-consumer (see Definitions) recycled content, creates markets for materials that are collected in recycling programs and saves valuable natural resources. It is suggested that products be purchased with the highest postconsumer content practicable. A commonly used and accepted set of minimum standards is the U.S. Environmental Protection Agency's (U.S. EPA) Comprehensive Procurement Guidelines (CPG) that specify ranges of minimum recycled content standards for a growing list of product types (see www.epa.gov/epawaste/consERVE/tools/cpg). The U.S. EPA Guidelines establish minimum recycled content standards for products in the categories of paper, construction, landscaping, parks and recreation, transportation, vehicles, and nonpaper office products including office furniture, as well as some other miscellaneous products such as pallets, signs and floor mats. Consider noting on materials printed for distribution that recycled content paper was used.

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Fact Sheets on purchasing paper office products, janitorial paper supplies, parks and recreation products, traffic control products, and nonpaper office products in Alameda County are available on-line at StopWaste's website at www.StopWaste.org/EPP, along with many other tools and resources for buying recycled content products.

- 3.2.2 Copiers, printers and multi-function devices purchased should be compatible with the use of recycled content products like paper and remanufactured toner cartridges. Purchasing specifications should also require training for equipment operators and maintenance personnel in the appropriate use of recycled products with the equipment. Specifications that require this compatibility will avoid improper uses and allow technicians to properly diagnose paper jams or equipment malfunctions without simply blaming what may be unfamiliar recycled content products.
- 3.2.3 Re-refined motor oil that is certified by the American Petroleum Institute (API) complies fully with vehicle manufacturers' warranty requirements. For information on the API's Engine Oil Licensing and Certification System, see www.api.org/products-and-services/engine-oil. For additional resources such as automotive industry positions, Public Contract Code requirements, and the Department of General Services Contract for purchasing re-refined oil products, refer to CalRecycle's information at www.calrecycle.ca.gov/UsedOil/Rerefined.
- 3.2.4 When specifying asphalt concrete, aggregate base or portland cement concrete for road construction projects, preferable recycled, reusable or reground materials include, but are not limited to, in-place recycling of asphalt concrete, aggregate base and portland cement concrete; rubberized asphalt concrete; recycled aggregate base; or recycled asphalt concrete. For more information on rubberized asphalt concrete, refer to CalRecycle's information at www.calrecycle.ca.gov/tires/rac.
- 3.2.5 When an organization specifies and purchases recycled content transportation and traffic control products, it is important to note that many of these products are approved by the California Department of Transportation (Caltrans). For a sample list of such products and Bay Area distributors, see StopWaste's Fact Sheet on "*Environmentally Preferable Traffic Control Products in Alameda County*" at www.StopWaste.org/EPP.
- 3.2.6 Recycled content papers should contain a statement such as "Printed on 100% Recycled Content Paper (50% Postconsumer)". Edit the statement for the actual recycled content percentage of the paper being used. If applicable, include statements such as "All Paper Processed Chlorine Free" and/or "Printed With Soy-Based Inks". See Section 3.6.5 of this *Implementation Guidance* for information about processed chlorine free paper products.

3.3 Energy Efficient and Water Saving Products

- 3.3.1 High efficiency space heating systems should be purchased that use natural gas rather than electricity, and have an annual fuel utilization efficiency (AFUE) of 0.86 or greater. High efficiency space cooling equipment should be purchased with an energy efficiency rating (EER) of 11.5 or greater. When applicable, specifications should require that equipment operators and maintenance personnel be trained in the proper enabling and use of energy efficient and sleep mode functions on the equipment.

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Rebates and incentives are available for products such as appliances, boilers, water heaters, food service equipment and heating, ventilation and air conditioning equipment. For eligible products and applications, see www.pge.com/en/mybusiness/save/rebates/index.page.

- 3.3.2 Incandescent, mercury vapor and T12 fluorescent lamps should be replaced with light-emitting diodes (LEDs), compact fluorescent lamps (CFLs), and low-mercury T8 or T5 fluorescent lamps. The magnetic ballasts used in older fluorescent lighting should be replaced with electronic ballasts. New lighting should be designed to use no more than 85% of the power allowed by Title 24 Energy Code. Title 24 is the State of California's energy efficiency standards for residential and nonresidential buildings (Title 24, Part 6) maintained by the California Energy Commission and described at www.energy.ca.gov/title24.

Purchasers should require vendors to recycle discarded lighting fixtures and lamps appropriately. For recycling requirements and best management practices for fluorescent lamps and tubes, see CalRecycle's information at www.calrecycle.ca.gov/ReduceWaste/FluoresLamps.

Initial purchasing costs for energy efficient lighting products are often higher than conventional non-energy efficient products, but the energy savings costs over time return a pay back. Rebates and incentives are also available to help pay for major lighting retrofits. See Pacific Gas & Electric's website at www.pge.com/en/mybusiness/save/rebates/index.page for more information.

Free resources are available to help local governments improve energy efficiency in their facilities through East Bay Energy Watch (EBEW), a local government partnership between PG&E and Alameda and Contra Costa Counties. Visit www.ebew.org for information about services, eligibility requirements and resources.

- 3.3.4 The U.S. EPA's Energy Star certification program certifies that certain products meet energy efficiency standards. Typically, this would include exhaust fans, water heaters, computers, exit signs, water coolers and appliances such as refrigerators, dishwashers and microwave ovens. Further, whenever roofs are replaced, Energy Star-qualifying roof materials should be used. The Energy Star program is described at www.energystar.gov.

When Energy Star labels are not available, choose energy efficient products that are in the upper 25% of energy efficiency as designated by the Federal Energy Management Program (FEMP). The FEMP is a program of the Department of Energy that provides agencies with the information, tools, and assistance they need to meet and track their energy-related requirements and goals (www.energy.gov/eere/femp/federal-energy-management-program). To learn more and access product information, energy and cost savings calculators, model procurement language, and other resources to help in the purchasing of energy-efficient products, see www.energy.gov/eere/femp/energy-and-water-efficient-products.

- 3.3.5 Water-saving products include high-performance fixtures such as toilets and conservation devices such as low-flow showerheads, faucet aerators and other water-saving devices. Purchasers should support water conservation practices such as retrofitting cooling towers,

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replacing water-cooled with air-cooled equipment, and upgrading irrigation systems. WaterSense is a U.S. EPA product certification and labeling program that has been developed to help residential and commercial purchasers identify water-efficient products in the marketplace. Products are independently certified by a third party to confirm that they meet EPA's criteria for efficiency and performance. See www.epa.gov/watersense.

Purchasers should consider applicable water conservation services and programs of the East Bay Municipal Utility District (EBMUD). The EBMUD supplies water and provides wastewater treatment for parts of Alameda and Contra Costa counties. Commercial, industrial and institutional customers in the District's service area may qualify for rebates for installing water-saving fixtures or equipment or for increasing the efficiency of process water uses. See www.ebmud.com.

The Dublin San Ramon Services District, www.dsrsd.com, Zone 7 Water Agency, www.zone7water.com, and Alameda County Water District, www.acwd.org, provide water conservation services and programs for their respective service areas in parts of Alameda County, including rebates for purchasing ultra low flow toilets, high efficiency clothes washers and certain landscaping equipment.

The California Urban Water Conservation Council has a wealth of resources on water efficiency and water efficient products. For information on water efficient products ranging from toilet fixtures to faucets to landscape irrigation, visit www.cuwcc.org and choose "Product Information" under the Resources.

For action items, environmentally preferable purchasing strategies and additional resources for buying lighting, appliances and other energy efficient and water saving products, see StopWaste's "*A Guide to Green Maintenance & Operations*" at www.stopwaste.org/resource/guide-green-maintenance-operations.

3.4 Green Building Products and Practices

3.4.1 Green Building practices produce durable, useful and comfortable buildings with a minimum of waste allowing the purchase of cost-saving, practical and environmentally sound products. The U.S. Green Building Council has developed LEED (Leadership in Energy and Environmental Design) rating systems that specify green building standards for commercial and institutional building design and construction, existing building operation and maintenance, neighborhood development and homes.

Credits are earned for satisfying defined criteria and standards. Different levels of green building certification are awarded based on the total credits earned. The LEED Green Building Rating Systems are described at www.usgbc.org. All existing and newly constructed and renovated jurisdiction-sponsored buildings should achieve as many pre-requisites and credits as feasible as described in the applicable LEED Rating System and any subsequent versions adopted. For example, in their adopted Environmentally Preferable Purchasing Policy, StopWaste is requiring that all their building and renovation projects meet a minimum LEED Silver rating or an Agency approved equivalent.

StopWaste has resources and tools available to help organizations incorporate green building

methods and techniques. For example, model ordinances, standards and guidelines, case studies and other Green Building and Construction & Demolition resources from StopWaste can be found at www.stopwaste.org/preventing-waste/business/green-construction-renovation.

“*A Guide to Green Maintenance & Operations*” was developed by StopWaste for building managers and maintenance staff to purchase products that increase energy efficiency, conserve natural resources and improve indoor air quality in their buildings. By making the purchases and adopting the practices suggested in this Guide, several points may be earned towards LEED for Building Operations and Maintenance (O+M) certification in addition to meeting several prerequisites. See the Guide at www.stopwaste.org/resource/guide-green-maintenance-operations.

A **Green Product Directory** can be found on the GreenPoint Rated website at <http://greenpointrated.com/products/>. GreenPoint Rated is a program of Build It Green, an independent green home certification program. Although geared towards residential, the Directory includes information and tips on products and features that may also be suitable for nonresidential buildings.

3.5 Landscaping Products and Practices

3.5.1 The principles of Bay-Friendly Landscaping recognize that the local landscape must be understood and considered in the application of sustainable landscaping management practices. This means first evaluating the climate, topography and soil for each project and application and considering the guidance of the organization’s Master Plans, for example.

Bay-Friendly Landscaping or sustainable landscape management practices include, but are not limited to:

- Managing pest problems through prevention and physical, mechanical and biological controls. An organization may choose to do this by either adopting and implementing an organic pest management policy and practices or adopting and implementing an Integrated Pest Management (IPM) policy using the least toxic pest control as a last resort.
- Grasscycling (leaving the clippings on the lawn) for at least 50% of all mowings. Learn about successful grasscycling techniques in StopWaste’s *Bay-Friendly Landscaping Guide to Grasscycling & Grasscycling Case Study* Download each at www.stopwaste.org/resource/brochures/bay-friendly-landscaping-guide-grasscycling-grasscycling-case-study or <http://rescapeca.org/resources/publications-list/>.
- Structural pruning of trees, shrubs and other plants to improve plant health, stability and form as the preferred method of pruning. For example, removing overlapping and crowded branches, dead and broken limbs, and multiple leaders. Heading, lopping or shearing is avoided, when possible.
- Avoiding synthetic quick release fertilizers that frequently wash through the soil before they are taken up by the plants. When possible, avoiding the use of weed and feed formulations. Fertilizing on an as needed basis, as indicated by a soil analysis. Slow release and/or organic

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fertilizers are preferred when possible. Slow release fertilizers make nutrients available to the plants when they are needed so their efficiency is increased making them a better value.

- Irrigation scheduling based on weather and soil moisture whenever possible. Drip irrigation is preferred whenever practical.
- Irrigating landscapes with recycled water. Recycled water has been effectively used for irrigation of turf areas such as school grounds, parks and golf courses, for example. Recycled water is rich with nutrients that benefit plants, however salt build up in the soil is a concern when considering recycled water for irrigating native or drought tolerant vegetation. According to East Bay Municipal Utility District's (EBMUD) "*Plants and Landscapes for Summer-Dry Climates*" book, research conducted by University of California and several northern California water utilities suggests that many plants most commonly used in California landscapes will thrive with recycled water. The EBMUD book cites a list of local native and drought-adapted plants that are salt tolerant.
- Limiting turf areas to recreational uses. All other landscaping (such as for views) should be accomplished with low-water plantings.
- Recycling of plant debris by composting and/or mulching. Maintaining a minimum 2-inch layer of mulch under all trees, shrubs and groundcovers and a minimum 3-inch layer in all open areas. Allowing leaf drop to become part of the mulch layer in tree, shrub and groundcover areas is preferred where possible to avoid soil compaction, reduction of nutrient levels, erosion and other undesirable effects for maintaining soil health.

Even in cases of infected leaves, such as oak leaf drop with the presence of mold, it is generally best if leaves are left on the site where they grew with good ground contact. In general, and especially with native trees, removing leaves from the site will just spread fungi spores to other sites and is not particularly effective at removing the fungus from the original site. When infected leaves have good ground contact, especially with good living soils with compost and mulch, they are colonized by a different set of decomposing organisms that assist in consuming the leaf infecting fungi. The healthier the soil, the more balanced this process becomes.

- It is suggested that compost be purchased that is produced from feedstock that includes at least 50%, by volume, regionally generated plant debris and/or food scraps and less than 0.5% by volume, physical contaminants. Procuring regionally helps the markets for local plant debris and food scraps collection and composting programs. The compost should be processed in accordance with California Code of Regulations, Title 14, Chapter 3, Article 7, Sections 17868.2-3 to promote pathogen reduction and weed seed kill and minimize heavy metal concentrations.

Bay Friendly Landscaping is described in more detail in the *Bay-Friendly Landscape Guidelines* – Download at www.stopwaste.org/resource/brochures/bay-friendly-landscape-guidelines-sustainable-practices-landscape-professional or <http://rescapeca.org/resources/publications-list/>.

See StopWaste's Landscape Design & Construction information and resources at

www.stopwaste.org/preventing-waste/business/landscape-design-construction.

Many more resources, events, trainings and tools are available from ReScape California, formerly known as the Bay Friendly Landscaping & Gardening Coalition, at <http://rescapeca.org/>.

- 3.5.2 Bay-Friendly Qualified landscape professionals have participated in a comprehensive training program. They have had the instruction to help them work with nature to reduce waste, conserve valuable resources, and prevent pollution. For a list of qualified design professionals and maintenance professionals, see <http://rescapeca.org/>.
- 3.5.3 Selecting plants that are compatible with the site and microsite, and with the mature size in mind, fosters healthy plants, limits overcrowding and the need for pruning, thereby preventing plant waste. Avoiding hedges and invasive species can also reduce waste. Selecting native plants from the Alameda County region or other Mediterranean plants that are appropriate to the microclimate, is likely to reduce watering needs and ongoing maintenance costs. Native plants also provide food and habitat for beneficial insects, birds and butterflies. Native plants will require irrigation for the first year or two but many can thrive with little or no irrigation once established. For a list of suggested plant species, see <http://rescapeca.org/>.
- 3.5.4 See the “*Bay-Friendly Landscaping Guide to Recycled-Content and Salvaged Materials*” at www.stopwaste.org/resource/brochures/bay-friendly-guide-recycled-content-and-salvaged-materials or <http://rescapeca.org/resources/publications-list/> for information on how to add value, reduce greenhouse gas emissions and create attractive landscapes using salvaged and recycled-content materials in the landscape. The Guide includes types and sources of materials as well as a section on using “urbanite”.

Permeable substitutes for impervious surfaces, such as rosin emulsion paving, are encouraged for walkways, patios, and driveways because of their ability to help control storm water drainage and retain less heat. More information on pervious paving materials can be found at the Sustainable Sources website at <http://perviouspaving.sustainable-sources.com>. For more information on rosin emulsion paving, see www2.buildinggreen.com/article/paving-without-asphalt-or-concrete.

3.6 Toxics and Pollution Prevention Products and Practices

- 3.6.1 Managing pests in landscapes and buildings based on an organic or Integrated Pest Management (IPM) strategy focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. In IPM, pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and nontarget organisms, and the environment. Particular pesticides to avoid due to high toxicity levels are Diazinon, Chlorpyrifos, Carbaryl, Malathion, and Pyrethroids.

Check with the Bio-Integral Resource Center (www.birc.org) or UC Davis’s IPM Program

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(www.ipm.ucdavis.edu) for up-to-date resources, trainings and information.

- 3.6.2 The VOC content of architectural coatings like paints, stains and sealers should not exceed the current content limits for its product category as set by the California Air Resources Board (CARB) unless specified otherwise in the Green Seal standard for paints (GS-11). See www.greenseal.org/Portals/0/Documents/Standards/GS-11/GS-11_Ed3-2_Paints_Coatings_Stains_and_Sealers.pdf (Edition 3.2, October 26, 2015, and as updated.).

A table of VOC Limits for Architectural Coating categories in California Air Districts and a "VOC Calculator" can be found on CARB's website at www.arb.ca.gov/coatings/arch/VOCLimits.htm.

For routine building maintenance, purchase latex water clean-up paint; carpet with high recycled content and low VOCs; low VOCs carpet adhesives or carpet with integral adhesives; zero-VOCs construction adhesives; furniture with recycled content and using glues, finishes and padding low in VOCs and formaldehyde; and casework specifying materials with no urea formaldehyde.

Mold inhibitors in paint for bathrooms, or other areas, add VOCs to paint as well as fungicides and mildewicides. There are products available that are water-based but use the bonding strength of the chemicals in the paint in addition to fungicides to reduce mold. The paint forms a bond that is too tight for water molecules to penetrate the surface with a generally recommended application of two coats.

- 3.6.3 See www.greenseal.org for information on Green Seal's programs and standards.

For a list of Green Seal's approved cleaning products including industrial and institutional cleaners, floor care products, hand cleaners and degreasers, and commercial cleaning services, refer to www.greenseal.org/FindGreenSealProductsAndServices.aspx.

To review Green Seal's standards for cleaning products and cleaning services, visit www.greenseal.org/GreenBusiness/Standards.aspx.

See <http://industries.ul.com/environment> for information on UL Environment's programs and standards, including GREENGUARD and ECOLOGO.

See the Sustainable Product Guide at <http://productguide.ulenvironment.com> for a list of UL Environment certified products.

To learn more about the hazards and risks of traditional cleaners, examples of environmentally preferable cleaning products, sample specifications and other resources, see StopWaste's Fact Sheet on "*Environmentally Preferable Janitorial Cleaning Products for Commercial Applications*" at www.StopWaste.org/EPP.

If cleaning or disinfecting products must be used that contain toxic materials, ensure that only the minimum amounts are used and the product is disposed of properly. When applicable, bid specifications should require that suppliers, manufacturers and/or City contractors and workers be trained in the proper use of cleaning and disinfecting products for worker health and safety,

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compliance with regulatory requirements, and cost-efficient product use and disposal. Proposition 65, the list of chemicals that are known to the State of California to cause cancer, birth defects or other reproductive harm can be found at www.oehha.ca.gov/prop65.html. The Toxics Release Inventory (TRI) is a publicly available U. S. EPA database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. It includes chemicals that are classified as carcinogens under the requirements of the Occupation Safety and Health Administration (OSHA). Information can be obtained from <http://www2.epa.gov/toxics-release-inventory-tri-program>.

- 3.6.4 See www.carpet-rug.org for information about the Carpet and Rug Institute (CRI). “Green Label/Seal of Approval” approved vacuum cleaners are listed at www.carpet-rug.org/CRI-Testing-Programs/CRI-Seal-of-Approval-Program/Vacuums.aspx.
- 3.6.5 Purchasing paper, paper products and janitorial paper products that are unbleached or that are processed without chlorine or chlorine derivatives minimizes dioxin formation and other toxic pollutants. Processed chlorine free (PCF) paper is the preferred environmental option (see Definitions). Elemental chlorine free (ECF) processes should include enhanced processes such as extended and oxygen delignification whenever possible (see Definitions). Vendors and successful bidders should supply verification of the paper’s chlorine free processing status from either a recognized certifying organization or the pulp and paper manufacturer. If the paper manufacturer buys pulp from another supplier, the pulp’s chlorine free status should also be verified. For more discussion of what may constitute verification, see Section 5.2 below. For more discussion on how to identify and purchase environmentally preferable papers, see StopWaste’s Fact Sheets on “*Environmentally Preferable Paper Office Products in Alameda County*” and “*Environmentally Preferable Janitorial Paper Supplies in Alameda County*” at www.StopWaste.org/EPP.
- 3.6.8 EPEAT (Electronic Product Environmental Assessment Tool) is a procurement tool to help institutional purchasers in the public and private sectors evaluate, compare and select desktop computers, notebooks and monitors based on their environmental attributes. See www.epeat.net. Tools for purchasers can be found at www.epeat.net/resources/for-purchasers. Resources include a database of registered products, model contract language, an electronics environmental benefits calculator and best practices for purchasing computers, displays and imaging equipment, among other tools.
- 3.6.10 For model bid language for carpet and a case study on carpet procurement and technical specification, see Alameda County’s sustainability website at www.acgov.org/sustain/what/purchasing. Success stories, bids and specifications, and other resources for a variety of other products are also available.
- 3.6.12 In 2004, EPA launched SmartWaySM — a brand that identifies products and services that reduce transportation-related emissions. When researching vehicle purchases, use the Green Vehicle Guide to identify the cleanest, most fuel-efficient vehicles available. See www3.epa.gov/smartway/.

For action items, environmentally preferable purchasing strategies and additional resources for buying

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less toxic paint, flooring, furniture, janitorial cleaning & supply products, and landscaping products, see StopWaste's "*A Guide to Green Maintenance & Operations*" at www.stopwaste.org/resource/guide-green-maintenance-operations.

3.7 Bio-Based Products

- 3.7.1 For more information on the use of biodiesel fuel, see StopWaste's Fact Sheet on "*Using Biodiesel Fuel in Alameda County, Focus: Use in Heavy-Duty Vehicles*" at www.StopWaste.org/EPP.
- 3.7.3 The City and County of San Francisco maintains a list of Vendors of Compostable or Recyclable Food Service Ware and Bags that includes resources for compostable plastic products such as plates, cutlery, to-go containers, and compostable bags. The list indicates whether products are certified, GMO-free, or heat / moisture resistant, as claimed by the manufacturers. See the lists of "bio-plastic" products at www.sfenvironment.org/sites/default/files/fliers/files/sfe_zw_vendors_bags_fsw_0.pdf
- 3.7.4 For information about ASTM (American Society for Testing and Materials) and to review the applicable standards, see www.astm.org. Click on "Standards" and enter the standard designation (ASTM D6400-04 or ASTM D6868-03).
- 3.7.5 The Biodegradable Products Institute (BPI) certification program is open, on a fee-basis, to all materials and products that meet ASTM D6400-04 or D6868-03 based on testing in pre-approved, independent laboratories. Certified products may be labeled with the BPI logo. For information about BPI, the certification program and lists of approved products, see www.bpiworld.org.

5.0 IMPLEMENTATION

The implementation section of the *Environmentally Preferable Purchasing Model Policy* considered by each organization will specify what needs to be done to implement the Policy, by whom, and on what schedule. The policy adopted may be implemented in phases, for example selecting first the products and services of most concern and priority for the organization such as environmentally preferable cleaning products or energy savings.

The implementation suggestions below are based on effective implementation experiences in other jurisdictions and organizations in California and across the country. Other implementation tools include the Implementation Work Plan and Sample EPP Goals List included in Attachment 3.

- 5.1 It is recommended that the Director of Purchasing, Director of Finance, or other responsible director implement this policy in coordination with other appropriate organization personnel. This may be done through development of an advisory committee or Green Purchasing Team consisting of members representing purchasers, printing and copying, Information Services, Public Works and construction, and all departments that purchase or specify products or award contracts for services that provide products. Examples of such a team's responsibilities from other organizations that have successfully used this approach include the following:
 - evaluating opportunities for substituting environmentally preferable products,

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- designing and implementing programs and processes for increasing the purchase of environmentally preferable products,
 - educating managers and staff about the organization's Environmentally Preferable Purchasing Policy,
 - ensuring that purchasing documents, specifications, and contracting procedures do not contradict each other and do not deter or inhibit the purchase of environmentally preferable products,
 - providing information to facilitate the evaluation and purchase of environmentally preferable products, including identifying appropriate products and sources and providing technical assistance, and
 - evaluating obstacles to purchasing such products in order to create solutions.
- 5.2 Successful bidders should be required to certify in writing that the environmental attributes claimed in competitive bids are accurate. Certification should be in the time and manner prescribed by the organization in purchasing or bid documents for compliance with specifications for environmental attributes. Certification may be accomplished by supplying signed verification from a recognized certifying organization such as U.S. EPA's Energy Star, Green Seal, UL Environment, SCS Global Services, and the Forest Stewardship Council, for example (see Definitions or other relevant sections in this *Implementation Guidance* and the *Model Policy* for descriptions of organizations and website addresses). Certification can also be provided by signed verification from the manufacturer, by identifying claim verification on the product, or by completing and submitting a written certification form (see Attachment 1 for sample language for a vendor certification). This requirement for certification should apply to products for which the successful bidder claims such attributes apply to the product, including, but not limited to, recycled content, chlorine free, non-toxic, reduced toxicity, sustainable forestry, and energy-saving features.
- 5.3 Buyers making the selection from competitive bids should be able to provide a written explanation for product choices that do not meet the environmentally preferable purchasing criteria in the bid document. Such written explanations should be filed with the Director of Finance, Director of Purchasing, or other position responsible for implementing this policy such as a Green Purchasing Team. The explanation should be submitted within a predetermined number of days of selecting the successful bidder and making the product choice (see Attachment 2 for a sample procurement determination form). This provides accountability that the standards in the organization's Environmentally Preferable Purchasing Policy are taken into account during purchasing decisions. It also helps in the evaluation process by identifying factors that prevent purchase of more environmentally preferable products and services.
- 5.4 To demonstrate commitment to ensuring that companies providing services to the organization are in compliance with environmental laws and regulations and are taking additional steps to conserve resources, prevent pollution and minimize waste, vendors and contractors wishing to provide services should be encouraged to become certified by the Bay Area Green Business Program. The Bay Area Green Business Program is a partnership of governments and businesses that certifies the environmental performance of government agencies and businesses. Targeted industries include automotive repair, printing, hotels/event centers, restaurants,

landscapers, industrial laundries and remodeling. See www.greenbiz.ca.gov.

6.0 PROGRAM EVALUATION

As with implementation, the evaluation section of the **Environmentally Preferable Purchasing Model Policy** considered by each organization will specify what needs to be done to evaluate and measure the effectiveness of the Policy, by whom, and on what schedule. The following suggestions can help determine the evaluation process.

- 6.1 The Director of Finance, Director of Purchasing, or other position responsible for implementing this policy such as a Green Purchasing Team, should periodically evaluate the success of implementing the organization's Environmentally Preferable Purchasing Policy. This may include providing a report annually to the organization's management or jurisdiction's Board of Supervisors, City Council, or other body. The report could include the results of tracking the purchase of environmentally preferable products compared to the total amount of products purchased. To the extent practicable, the tracking system should build on existing methods to track purchases and include information on the annual volume and dollar amount of environmentally preferable products purchased compared to the total amount of products purchased, within general product categories. However, a simple list of the environmentally preferable products purchased is acceptable. Whenever practicable, vendors should be required to provide reports on their sales of environmentally preferable products to assist the organization in this tracking.

When possible, annual reports should include an evaluation of the performance, safety, cost, and environmental benefits achieved through use of the environmentally preferable products purchased. This can include case studies or anecdotal information from purchasers or users of the products. Reports should relate progress in meeting the stated objectives of the organization's Environmentally Preferable Purchasing Policy (see Sections 1.0 and 2.0 of the **Model Policy**) and be in accordance with the Strategies for Implementation categories used in the Policy.

Annual reports should include notation of any barriers encountered in procurement of environmentally preferable products, recommendations for resolution, and/or description of assistance needed for overcoming the obstacles. It is suggested that the first annual report be issued within one year following the effective date of the organization's adoption of their Environmentally Preferable Purchasing Policy.

7.0 DEFINITIONS (as referenced in this *Implementation Guidance*)

Elemental Chlorine Free (ECF) bleaching processes replace elemental chlorine gas with a chlorine derivative as the bleaching agent. There is a wide range of different bleaching sequences covered under this term. While all ECF processes significantly reduce the amount of dioxins created in the bleaching process, those that include enhanced processes such as extended and oxygen delignification achieve the greatest reduction.

Processed Chlorine Free (PCF) refers to a recycled product in which the recycled content is produced using no chlorine or chlorine derivatives. Any virgin content in the product must also be produced using no chlorine or chlorine derivatives.

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Scientific Certification Systems, now doing business as SCS Global Services, provides independent third-party evaluation and certification of environmental claims in product manufacturing, among other programs. See www.scsglobalservices.com for information about the organization and its programs and services in manufacturing, food and agriculture, forestry, fisheries, and climate change.

ATTACHMENT 1

SAMPLE LANGUAGE FOR VENDOR CERTIFICATION

The Federal Acquisition Regulation (FAR) uses the language below (or variations) for certifying a variety of environmental claims, from recycled content to ozone-depleting substances.

Example: Language inserted in solicitations that are for, or specify use of recovered materials:

“Recovered Material Certification. The offeror <bidder> certifies, by signing this offer <bid>, 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.”

Example: Language inserted in certain solicitations and contracts that are for, or specify use of recovered materials:

“Estimate of Percentage of Recovered Material Content for EPA-Designated Products. The contractor, on completion of this contract, shall (1) estimate the percentage of the total recovered material used in contract performance, including, if applicable, the percentage of postconsumer material content; and (2) submit this estimate to <contracting officer>.”

Example: Language inserted in certain solicitations and contracts where certification is required:

“The contractor shall execute the following certification:

Certification

I, _____ (name of certifier), am an officer or employee responsible for the performance of this contract and hereby certify that the percentage of recovered material content for EPA-designated products met the applicable contract specifications.

(Signature of the Officer or Employee)

(Typed name of the Officer or Employee)

(Title)

(Name of Company, Firm or Organization)

(Date)

Recommendation: Modify as an attachment to the organization’s Environmentally Preferable Purchasing Policy and/or prepare different versions applicable to recycled content, energy-efficiency, or other environmental attributes as part of purchasing or bid documents.

ATTACHMENT 2

SAMPLE PROCUREMENT DETERMINATION FORM

Item: _____

____ This item is required to meet Environmentally Preferable Purchasing (EPP) guidelines as described in [organization's policy, resolution or legislation identification information].

____ I have considered the Environmentally Preferable Purchasing guidelines and searched for product or service options that meet the guidelines.

____ Compliance with [organization's policy identification] was not attainable for this purchase because:

____ Item is not available within a reasonable period of time.
(Need date: _____ Date available: _____)

____ Item fails to meet a performance standard in the specifications.
Specifically, _____

____ Item is not available, or is not available from two or more sources.
Market research was performed by calling ____ (insert number) vendors, but only _____ (enter name) was able to supply the item.

____ Item was only available at an unreasonable price (i.e., EPP item cost more than non-compliant item).
Price of EPP item: _____
Price of non-compliant item: _____

____ Compliance would conflict with state or federal law requiring that:

Signature of Purchaser

Printed Name of Purchaser

Date

ATTACHMENT 3

SAMPLE IMPLEMENTATION WORK PLAN
ENVIRONMENTALLY PREFERABLE PURCHASING (EPP) POLICY

Step 1 Options – Getting Started:

- ❑ Create Green Team(s)*
- ❑ Create an Action Plan, Target List or EPP Goals List. Include timeline, point of contact for each item or goal. This could be by department, product, or product category. Examples:
 - Increase use of 30% post-consumer recycled copy paper by 90% in City Attorney’s Office by next Green Team meeting.
 - Switch to green cleaners in 50% of offices by FY20xx.
 - Include requirement for Bay Area Green Business Program Certification in next bid package for printing services.
- ❑ Identify one or more EPP Champions

Step 2 Options – Taking Action:

- ❑ Evaluate current purchases
- ❑ Educate or train staff
- ❑ Review and modify current and upcoming bids and contracts
- ❑ Test environmentally preferable products
- ❑ Track environmentally preferable purchases
- ❑ Seek opportunities for cooperative purchasing
- ❑ Outline services provided in-house and services needed from StopWaste.Org. Identify point of contact for each service:
 - Education or training sessions
 - Tracking systems
 - Reviewing contracts and writing specifications
 - Setting up pilot testing of proposed environmentally preferable product(s)
 - Working with service provider(s) to review an environmentally preferable product(s)
 - Inventorying current purchases
 - Participating on Green Team(s)
 - Identifying target products or action items.

*For more information about Green Teams, download or view articles, reports and resources from GreenBiz including “*Green Teams: Engaging Employees in Sustainability*” at www.greenbiz.com/blog/2009/12/07/10-best-practices-building-green-teams and “*Charting the Future of Green Teams*” at www.greenbiz.com/blog/2011/10/28/charting-future-green-teams.