

The City of San Diego

## Environmentally Preferable Purchasing Program (EP3)



## FY2007 Annual Report

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Environmental Services Department  
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## **I. Introduction**

The City of San Diego is committed to finding ways to reduce workplace hazards and protect environmental resources by reviewing the products currently purchased by City departments and directing funds toward more environmentally responsible alternatives. This will be accomplished through the Environmentally Preferable Purchasing Program (EP3), under the guidance of the Environmental Services Department (ESD) and the Purchasing & Contracting Department (P&C). The success of the program will be proportional to the participation by all City employees as they realize the benefit of new opportunities offered by vendors and manufacturers that are increasingly embracing green technologies and practices.

“Environmentally Preferable” (EP) means having a lesser or reduced effect on human health and the environment when compared with competing products that serve the same purpose. EP products or services minimize the consumption of resources, energy and water; prevent or minimize the creation of solid waste, air pollution or water pollution; minimize the use of materials or processes which compromise the environment; and/or promote the use of less or non-toxic substances, and avoid toxic materials or processes.

Due to significant advances in the quantity and quality of EP products and services, as well as increased awareness of the benefits these products and services have on human health and the environment, ESD collaborated with the P&C Department and other City departments to develop an Administrative Regulation (A.R.) that serves as a framework for existing and future purchasing practices within the City organization. Its purpose is to balance multiple environmental attributes with price and performance considerations.

As can be seen from the examples in this first annual report, excellent progress has already been made by many City departments in sourcing EP products and services. There were approximately \$17.8 million in purchases of these products in FY07 and \$10.6 million in savings were realized as a result of switching to the more environmentally preferable options. Because purchasing decisions are decentralized throughout City departments, ESD and P&C have made it a priority to provide ongoing information, education and technical assistance to employees using the internet, newsletters, individualized technical assistance, and through participation in green procurement forums.

By developing the EP3 A.R. and putting it into practice as illustrated in this report, the City is leading the way for businesses and other organizations to reduce our impact on the environment. ESD staff have participated in local panel discussions, participated in the “Responsible Purchasing Network”, and have been featured in national green procurement outreach efforts coordinated by the United States Environmental Protection Agency (US EPA).

## **II. Environmentally Preferable Purchasing**

### **Administrative Regulation 35.80**

A.R. 35.80, Environmentally Preferable Purchasing, became effective April 4, 2007 with the purpose of establishing guidelines and procedures for purchases of environmentally preferable products and services. The A.R. requires City departments to purchase EP

products and services whenever practicable and expands the commitment of the City to purchase products with recycled content, lower toxicity, and greater conservation of energy, water, and other resources.

A.R. 35.80 states that “City departments shall purchase Environmentally Preferable Products or non-professional services whenever possible by taking into consideration appropriate environmental attributes or benefits along with price and performance standards.” The A.R. identifies twelve basic environmentally preferable characteristics, or attributes to be used in evaluating whether a given product or non-professional service is environmentally preferable. These include:

- 1) Alternative Energy Source
- 2) Bio-based
- 3) Biodegradable
- 4) Compostable
- 5) High Recycled Content
- 6) Low Toxicity
- 7) Low Volatile Organic Compound (VOC)
- 8) Pollution (air, water, solid waste) Reduction
- 9) Recyclable
- 10) Repairable
- 11) Resource Efficient (water conserving and/or energy efficient)
- 12) Reusable

An Environmentally Preferable Purchasing Evaluation Checklist (Attachment 1) is available to City employees to assist with the evaluation of products and non-professional services. If an environmentally preferable product or service is not selected for use, employees must submit a Procurement Justification Form (Attachment 2) along with their purchase request.

All City departments are required to follow the procedures outlined in A.R. 35.80. EP3 is specifically geared toward employees who:

- Identify or specify products or services for purchase by their department or division
- Write bid specifications for products, equipment or services
- Draft contracts for products or services
- Use City Standard Purchase Orders, Citywide Open Blanket Purchase Orders, petty cash, City credit card, or other City purchasing methods

## **Program Goals**

The primary goal of EP3 is to promote the purchase of EP products and services throughout City departments for the purpose of fostering the practice of responsible purchasing choices that are cost effective and reduce the impact of such purchases on public health and the environment.

To accomplish this, the following goals have been established for EP3:

- Increase purchases of EP products and services through expanded access to citywide contracts
- Educate City employees on the benefits and opportunities associated with EP

- products and services
- Institutionalize EP procurement activities among City personnel
- Improve tracking and reporting of EP purchases
- Provide outreach to vendors and service providers on the City's EP3

## **Program Implementation**

EP3 is designed to implement and document changes in procurement practices of City employees, which can only be successful with the full participation of those employees responsible for purchasing decisions. With a \$3.3 billion proposed budget in FY09, it is evident the City has a unique opportunity to impact sustainable purchasing practices in the region. ESD and P&C have identified the following EP3 program roles and guidelines:

ESD's role includes:

- Administer the EP3 program to help City departments increase their purchase of EP products and services, with the City's Central Stores in close partnership
- Research recycled and other environmentally preferable products, applications, and service providers
- Communicate appropriate information to department contacts to enable them to incorporate environmental considerations when making purchasing decisions
- Produce an e-mail bulletin to provide users with information about EP3 products and services
- Develop and maintain an internet website which:
  - provides resources and tools to facilitate internal implementation of this policy
  - demonstrates the City's leadership in providing a resource for other agencies and organizations in the region
- Review EP3 requirements with City departments and monitor the status of policy implementation
- Prepare an annual report on the status and progress of EP3 to the Mayor

P&C's role includes:

- Ensure that City bid specifications and contracts require recycled and other EP components whenever feasible and that contractors provide appropriate certification of this content
- Work with product and service contractors to track and report EP purchases made by City departments
- Assemble and disseminate evaluation results and reports of environmental purchases by departments

- Coordinate development and implementation of procurement guidelines and recommend revisions to City policy

## **Future Challenges & Opportunities**

As with any new undertaking, there are several challenges that must be faced in the City's efforts to increase environmental purchasing:

- Due to unfamiliarity with the many types of recycled and other environmentally preferable products, project managers, designers, and contractors may be reluctant to specify these products because of uncertainty of the ways in which they might be effectively applied as substitutes for more familiar products.
- New and emerging companies that develop and provide environmentally preferable products must first develop successful track records, including establishing the production, marketing, and distribution capacity to meet the needs of their customers.
- EP products and services must be cost effective when taking into account the lifecycle cost and the environmental benefit.
- Many products purchased by the City must meet rigorous quality and performance standards, many of which did not originally take into consideration environmental attributes or impacts. Modification of these standards can be a slow process and many environmentally preferable standards and specifications are a work in process as demand grows and new product offerings are made. Due to this time lag, manufacturers, regulators, and users may not be equipped to deal with new materials effectively.
- Data collection procedures to obtain appropriate information on environmental purchases often places unfamiliar demands on participants, which may cause resistance to the program.
- Potential false claims by vendors increase the need for due diligence.
- Employees responsible for developing specifications and/or securing purchases must learn to balance competing claims of environmental preferability. These employees must decide how much weight to give recycled content, how much to give low toxicity, how to balance recyclability against energy efficiency and how to prioritize the many other elements of environmental preferability.

ESD and P&C staff will address these challenges by:

- Maintaining liaisons between City departments and ESD and P&C to facilitate program implementation, purchases, and data collection
- Researching new applications for recycled and other EP products and encouraging supply and contract managers to specify them whenever possible
- Providing departments on-going training, information and assistance in developing specifications and contracts for EP products and services

- Maintaining links to the most comprehensive and authoritative databases to assist in the use of product specification language and specific products and vendors, including those that are third-party certified
- Helping product suppliers obtain feedback from various end users to assist them in refining product development and helping them understand the City of San Diego's procurement processes
- Working with vendors to self report their EP product sales to the City of San Diego
- Continuing to network with other agencies and organizations to share information and successful implementation strategies

### **III. Citywide Purchases**

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#### **Purchase Summary**

In FY07, the City purchased approximately \$17.8 million worth of environmentally preferable products and services. The following tables summarize the major environmentally preferable product purchases for the FY07 reporting year (July 1, 2006 – June 30, 2007).

<b>Citywide FY07 EP3 Purchases <sup>(1)</sup></b>	<b>Amount</b>
<b><i>Paper &amp; Office Products</i></b>	
Recycled paper <sup>(2)</sup>	\$248,524
Office products <sup>(3)</sup> (Corporate Express)	\$362,547
Konica Minolta contract	\$1,620,000
Energy Star HP desktop PCs	\$2,613,822
Energy Star HP laptops	\$719,131
Energy Star HP monitors	\$478,157
Energy Star HP printers	\$340,089
<b>Subtotal</b>	<b>\$6,382,270</b>
<b><i>Equipment, Vehicles &amp; Maintenance</i></b>	
Trash and recycling carts	\$1,266,308
Hybrid vehicles	\$284,620
Coolant	\$26,400
Re-refined oil	\$14,450
Ultra-low sulfur diesel and liquefied natural gas fuel	\$891,600
Retread tires	\$514,836
<b>Subtotal</b>	<b>\$2,998,214</b>
<b><i>Building and Construction Materials</i></b>	
Asphalt	\$1,122,836
Class II aggregate road base	\$884,415
Asphalt crack sealer	\$798,431
Traffic cones	\$23,702
Roofing materials	\$47,250
Backfill	\$110,250
Cement/concrete	\$18,900

Shower/restroom partitions	\$26,100
Floor tiles	\$26,290
Paint	\$199,500
Building insulation	\$26,100
Carpet and carpet padding	\$13,755
<b>Subtotal</b>	<b>\$3,297,529</b>
<b><i>Building Supplies, Maintenance &amp; Energy Efficiency</i></b>	
Building and janitorial supplies	\$426,096
Bath tissue and paper towel (CY07)	\$275,880
Energy efficiency and solar power	\$304,789
Biogas	\$2,629,470
Compact fluorescent bulb exchange <sup>(4)</sup>	\$5,570
Fluorescent lamps	\$10,768
LED "Walk/Don't Walk" signals	\$50,000
Garden hose	\$8,842
Compost and mulch (65,200 cy)	\$195,600
<b>Subtotal</b>	<b>\$3,907,015</b>
<b><i>Other</i></b>	
Compost bins	\$31,328
Water conservation incentives	\$283,244
Reclaimed water	\$866,008
<b>Subtotal</b>	<b>\$1,180,580</b>
<b>Total Citywide EP<sup>3</sup> Purchases</b>	<b>\$17,765,608</b>

- (1) Not a complete listing. Does not include purchases made by the Stormwater Pollution Prevention Program or Qualcomm Stadium.
- (2) Purchased by Print Shop from Unisource.
- (3) Includes recycled content paper purchased from Corporate Express.
- (4) City is reimbursed for this cost through a grant.

<b>FY07 Savings / Revenue from EP<sup>3</sup> Purchases<sup>(1)</sup></b>	<b>Amount</b>
Energy efficiency and renewable energy <sup>(2)</sup>	\$8,478,627
Reclaimed water savings	\$1,685,467
Retread tires	\$342,225
Recycling of old or damaged blue and black bins	\$45,024
<b>Total Citywide Savings from EP<sup>3</sup> Purchases</b>	<b>\$10,551,343</b>

- (1) Not a complete listing.
- (2) Calendar year 2007 savings. Assumes energy cost of \$0.16 per kilowatt hour (kWh).

## Purchase Detail

City departments purchased a variety of EP products and services, including recycled paper, energy efficient products, re-refined antifreeze and motor-oil, plastic lumber, compost, tire-retreading services, reclaimed water, and hybrid vehicles. Many of these products were more economical than those they replace. Following is a summary of these purchases.

### Paper and Office Products

#### Copy and Printing Paper

City departments purchase recycled non-chlorine bleached copy paper with 30% post-consumer content through Central Stores. All paper purchased by the City Print Shop for printing and copying projects is recycled content paper. In addition, many



departments purchased 100% post-consumer recycled content copy paper available from Corporate Express.

Beyond recycled copy and printing papers, the City also maintains several contracts that allow departments to purchase other recycled paper products such as office supplies, such as envelopes, boxes, folders and notepads; and janitorial products, such as paper towels and tissues.

#### Office Products

Office supplies were purchased through a citywide contract with Corporate Express in FY07. Corporate Express identifies environmentally preferable products with a green dot in their catalog so purchasers can easily identify these products. In FY07, the City purchased over \$360,000 of EP office supplies and recycled paper on this contract. In addition, over \$5.7 million worth of Energy Star certified computers, monitors, printers, and copiers were purchased in FY07.

#### Electronics Recycling

Since 2004, the City has been recycling obsolete computers, TV's and other electronic equipment through a competitively bid contract with a local recycling firm. During FY07, the City recycled over 2,807 computers, 1,688 monitors, and 688 pieces of other electronic equipment. In addition, the City began a "technotrash" recycling program in FY07 to recycle small electronics and storage media such as CDs, DVDs, floppy disks, video tapes, handheld electronics, and digital cameras. 91 pounds of technotrash was collected and recycled from April to June 2007.

#### **Equipment, Vehicles & Maintenance**

In FY07, the City purchased over \$1.2 million of automated trash and recycling containers, all of which are manufactured with recycled plastic content.

The City purchases hybrid electric vehicles (HEVs) that increase fuel-efficiency and reduce greenhouse gas emissions. Hybrids offer low emission, fuel-efficient, and cost effective solutions for the City and are replacing older model vehicles as they are retired. In addition, the entire 167 vehicle fleet of Collection Services Division's trash and recycling trucks operate on ultra-low sulfur diesel fuel, utilize re-refined oil and recycled anti-freeze, and run on re-tread tires.

#### **Building and Construction Materials**

In FY07, the City purchased almost \$3.5 million of environmentally preferable (mostly recycled-content) building and construction supplies including roofing materials, backfill, restroom partitions, floor tiles, paint, carpet and padding.

The Street Division uses Class II aggregate road base containing 20% recycled content and asphalt made with recycled content. Street repairs are made with rubberized crack sealant that is manufactured with recycled crumb rubber.

#### **Building Supplies, Maintenance and Energy Efficiency**

##### Janitorial Supplies and Paper Products

Environmentally preferable janitorial products include soap, sanitizer, and cleaners; trash bag liners, mops, and rags. The City purchased over \$400,000 of these products in FY07, in addition to \$275,000 worth of recycled content paper towel and bath tissue.

### Mulch and Compost

Mulch produced from green material brought to the Greenery is used for erosion control throughout the landfill, eliminating the need to purchase straw or other virgin products. The Greenery's compost and mulch are also currently used for all restoration work at the City's inactive landfills and at City construction projects. In FY07, approximately 100,235 tons of greens were processed at the Greenery, which resulted in over \$333,000 in sales of compost, mulch and wood chips to landscapers and other users and took in \$1,710,000 collected in greenery fees. Self-loaded compost and mulch were also provided to City residents at no charge.

### Aerosol Cans

The Water Department spent \$700 on an aerosol can consolidation machine in FY07 to reduce the amount of hazardous waste disposed at the Chollas facility. The device punctures aerosol cans containing flammable paints and drains the residual amount of paint in the can into a large drum, which is then disposed as hazardous waste when full. The empty aerosol paint can is recycled as scrap steel. The previous disposal method was to place the cans in a large drum for disposal as hazardous waste. In six months, the Water Department collected approximately 800 aerosol paint cans, which would have filled eight 55 gallon drums for hazardous waste disposal. Using the consolidation device, the liquid drained from these 800 cans only filled one 30 gallon drum for hazardous waste disposal, resulting in approximately \$1,400 in savings versus the previous disposal method.

### Energy Efficiency and Alternative Power

The Energy division of ESD works with departments across the City to pursue its goal of energy independence, and become a model city in energy conservation and in the use of renewable energy. The City of San Diego is a US EPA Green Power Partner and is one of the EPA's top 10 local government green power purchasers. The majority of the City's green power use comes from self-generated power from cogeneration facilities that use biogas from sewage treatment and landfill disposal. A small portion also comes from hydro-electric power generated by the flow of treated wastewater.

Highlights from 2007 include the following:

- The Energy Division helped the City negotiate a power purchase agreement with a private firm to install, own and operate a photovoltaic system at the Alvarado Water Treatment Plant. All the power generated by the solar panels will be purchased by the Water Department at a negotiated cost, allowing the City to pay stable energy costs for the solar generated power for the next 20 years. The price is anticipated to be lower than San Diego Gas and Electric's retail electricity price. In addition, the City did not need to front the capital costs to install the system.
- Four rooftop photovoltaic systems were installed on two libraries, one recreation center, and one police station.
- Landfill gas is collected and converted to electricity at the Miramar Landfill. 1,140 million cubic feet of methane was collected in FY07, resulting in the generation of approximately 43,978,000 kilowatt hours of electricity, which the City purchased for \$2.6 million dollars.
- Since 1997, the Street Division of the General Services Department has converted more than 32,000 incandescent traffic signal lights to LED. All the red

signal indications and over 90% of the green indications have been converted to LED. Amber indications are converted as replacement is needed. In FY07, 16 new signalized intersections that use all LED red, amber, and green indications were installed in the City. The cost for these new intersection signals did not come out of the Street Division budget, but was paid for by the developer as part of the project.

- In 2003, the Division began converting the “Walk/Don’t Walk” indications from incandescent to neon as replacement is needed. The Division spends approximately \$50,000 annually on the new neon lights. The new “Walk” indications, which are typically lit 35% of the time, reduce energy use from 20 watts to 8 watts; and the “Don’t Walk” indications, which are typically lit 65% of the time, reduce energy use from 38 watts to 8 watts.
- In addition to energy efficiency measures installed at City facilities, approximately 1,500 compact fluorescent bulbs were given out to residents in bulb exchanges, saving 6,400 kilowatt hours annually. The bulbs cost approximately \$4,100, but are reimbursed to the City via a grant-like agreement.

### **Compost Bins**

In FY07, the City spent \$31,328 on compost bins made from 50% post-consumer recycled plastic. The bins were sold to residents for backyard composting during a weekend sale event and also at the Miramar Recycling Center.

### **Water Conservation Incentives**

In FY07, the City spent \$283,244 on financial incentives for water customers to replace high use fixtures with water efficient fixtures.

### **Reclaimed Water**

Five City departments (Engineering and Capital Projects, Environmental Services, Metropolitan Wastewater, Parks and Recreation, and Water) purchased over 8 million gallons of reclaimed water for irrigation, dust control, and industrial uses at a cost of \$866,008.

### **Additional Savings / Revenue**












- The City saved almost \$1.7 million by using reclaimed water instead of potable water.
- In calendar year 07, the City saved almost \$8.5 million, from energy efficiency improvements, solar panels, and biogas cogeneration facilities. In addition, the City earned \$829,000 in revenue from the sale of green power that it generated to San Diego Gas & Electric Company (SDGE).
- The use of retread tires saved over \$340,000 in tire costs.
- The City’s old black trash and blue recycling containers are collected and sold to be ground up and recycled once they are no longer functional. ESD received over \$45,000 last year for the recycling of its blue and black containers.

## **IV. Conclusion**

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It is envisioned that future progress with EP3 will be through the accomplishments of City employees who are willing to facilitate change by working with vendors and service providers to offer viable and economical environmental products, as well as by pursuing ways to incorporate environmentally preferable products in new applications. FY08 will be the first full year that the EP3 will have been in place and next year's report will focus on the changes and accomplishments that were made by different departments in their procurement practices.

Attachment 1

Environmentally Preferable Purchasing Evaluation Checklist			
<b>Product</b>	<b>Evaluator</b>		
Product Name: _____	Name: _____		
Manufacturer: _____	Dept./Div.: _____		
Item No.: _____	Phone: _____		
Main Use: _____	Date: _____		
<b>Scoring Criteria</b>			
[Select a criteria score of 0 to 5]			
<b>5 = Meets EPP category criteria</b>			
<b>3 = Meets some EPP category criteria</b>			
<b>0 = Does not meet EPP category criteria</b>			
<b>N/A = Not Applicable to specific EPP category criteria</b>			
<b>Unk = Unknown</b>			
		Meets EPP Criteria?	Criteria Score
		(Y / N)	(0-5)
		(N/A, Unk)	(N/A, Unk)
<b>Environmentally Preferable Attributes/Categories</b>			
<b>Bio-based</b>	Is this product made from plant-based raw materials?		
<b>Biodegradable</b>	Is this product capable of being decomposed by natural biological processes?		
	<b>Compostable</b> Is this product made of cellulose-containing materials that can be broken down into compost when subjected to biological degradation?		
	<b>Resource Efficient</b> Does this product conserve water or energy?		
	<b>Low Toxicity</b> Does this product contain less toxic chemicals than other similar products? Look for products that are <b>not labeled</b> with any of the following: Caution: mild to moderate hazard Warning: moderate hazard Danger: corrosive, extremely flammable, or highly toxic Poison: highly toxic		
	<b>Low Volatile Organic Compound (VOC)</b> Does this product contain a low amount of organic compounds?		
	<b>Pollution Reduction (air, water, solid waste)</b> Does this product prevent waste and harmful substances from contaminating the environment?		
	<b>Alternative Energy Source</b> Does this product utilize a form of energy that is capable of doing the same work as traditional forms of energy? (i.e. solar, wind, etc.)		
	<b>Recyclable</b> After its intended use, can this product be collected and recycled?		
	<b>High Recycled Content</b> Is this product made with a high percentage of recycled material?		
	<b>Repairable</b> Can this product be potentially rebuilt or repaired to be used again?		
	<b>Reusable</b> Can this product be used more than once?		
<b>Product Certification</b>		Y / N	Y = 5 / N = 0
	Has this product received Green Seal certification?		
	Has this product received other environmental certifications? (i.e. Energy Star, ISO 14000, etc.)		
		<b># of Y's: Total Points:</b>	
<b>Total Score: (Maximum of 70 points)</b>			
<b>Total number of scores rated as N/A (Not Applicable):</b>			
<b>Total number of scores rated as Unk (Unknown):</b>			

**Attachment 2**

**Environmentally Preferable Purchasing  
Procurement Justification Form**

**Product/Service:** \_\_\_\_\_

Please check all that apply:

I have considered the Environmentally Preferable Purchasing guidelines and procedures as outlined in Administrative Regulation 35.80 and have searched for product or service options that meet them.

Compliance with Administrative Regulation 35.80 was not attainable for this purchase because:

Product or service is not available within a reasonable period of time.

(Date needed: \_\_\_\_\_ Date available: \_\_\_\_\_)

Product or service fails to meet a performance standard in the specifications.

Specifically: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Product or service is not available, or is not available from 2 or more sources.

Product or service was only available at an unreasonable price.

Price of EPP product or service: \_\_\_\_\_

Price of non-compliant product or service: \_\_\_\_\_

Compliance would conflict with state or federal law requiring that:

\_\_\_\_\_

\_\_\_\_\_  
Signature of Purchaser

\_\_\_\_\_  
Printed Name of Purchaser

\_\_\_\_\_  
Date