

INDUSTRY GROUP 02: SERVICES – MEDICAL & HEALTH*

SIC Major Group: 80
NAICS Code: 622

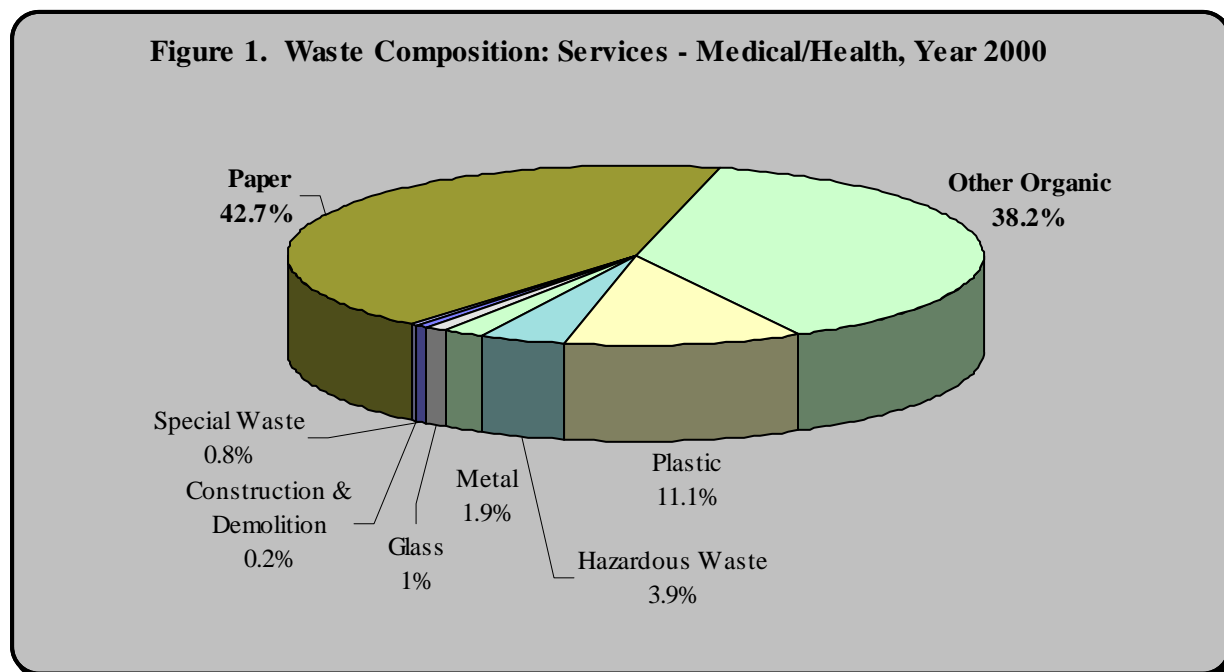
INTRODUCTION

The City of Los Angeles is a recognized leader amongst the major cities in the United States in solid waste prevention and recycling programs. Los Angeles has well exceeded the California state mandate of achieving and maintaining a 50% waste diversion rate for the year 2000. To identify the materials still reaching landfill disposal, and to assist local businesses in creating their own waste diversion programs, we are providing information on waste disposal and diversion for specific industry groups.

The *Services – Medical & Health* industry group includes establishments primarily engaged in furnishing medical, surgical, and other health services to persons. Establishments of associations or groups, such as Health Maintenance Organizations (HMOs), primarily engaged in providing medical or other health services to members are included, but those which limit their services to the provision of insurance against hospitalization or medical costs are classified in Insurance, Major Group 63. Hospices are also included in this major group and are classified according to the primary service provided.

GENERAL WASTE COMPOSITION

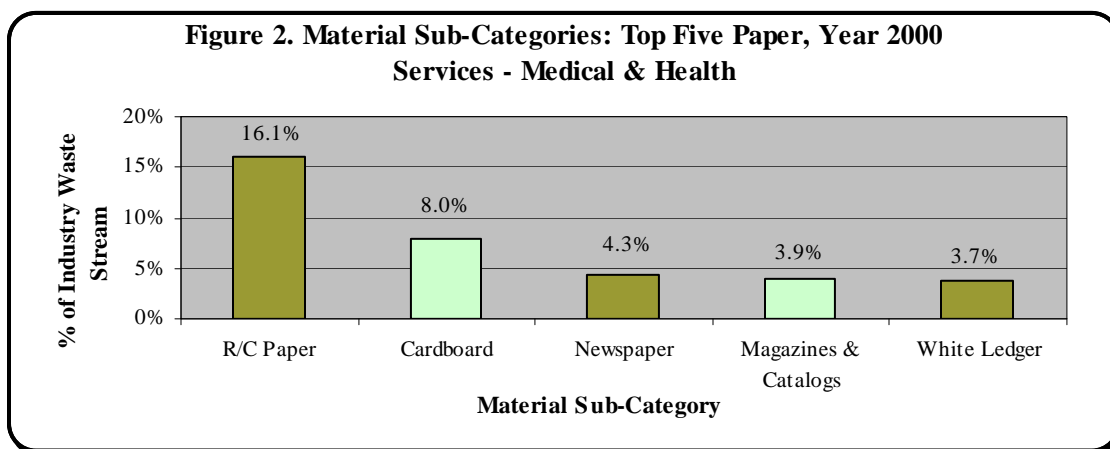
The *Services – Medical & Health* industry group disposed 98,837 tons of waste in 2000 or approximately 2.8% of the total City of Los Angeles disposed waste stream (3,544,611 tons). Figure 1 displays the total waste composition by material category. The two categories that comprise the majority of the waste stream, *Paper* (42.7%) and *Other Organic* materials (38.2%), are further discussed in the “Detailed Waste Composition” section that follows.



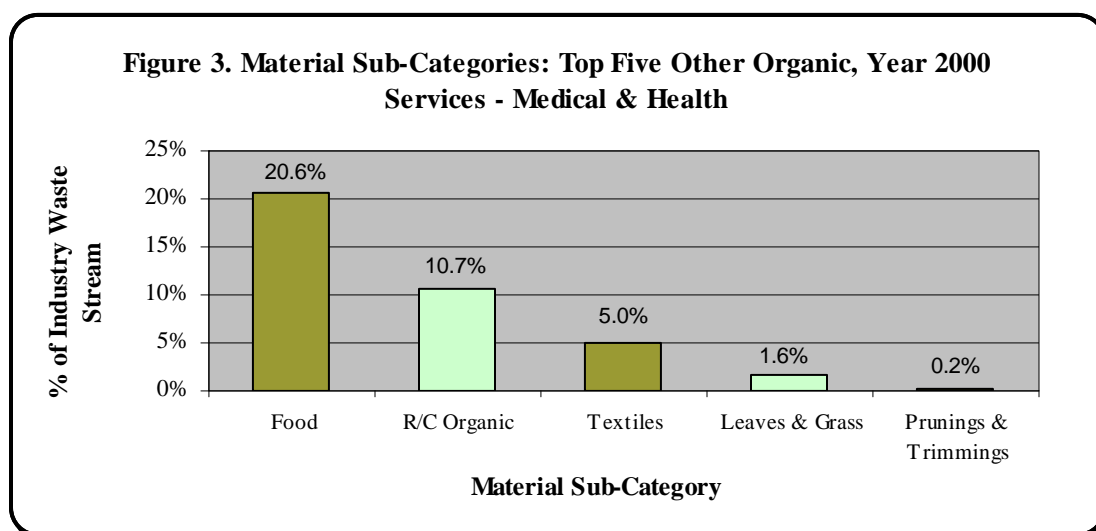
* For additional information or assistance, please contact the City of Los Angeles, Public Works, Bureau of Sanitation, **Solid Resources Citywide Recycling Division** at (213) 473-8228.

DETAILED WASTE COMPOSITION

As Figure 2 indicates, the top four material sub-categories of *Paper* disposed (by weight) are Remainder/Composite Paper (R/C Paper)¹, Cardboard, Newspaper, and by Magazines & Catalogs, followed by White Ledger.



As Figure 3 indicates, the top three material sub-categories of *Other Organic* materials disposed are Food, Remainder/Composite Organic (R/C Organic)², and Textiles, followed by Prunings & Trimmings and Leaves & Grass.



¹ According to the California Integrated Waste Management Board, "Remainder/Composite Paper" means items made mostly of paper but combined with large amounts of other materials such as wax, plastic, glues, foil, food, and moisture. Examples include waxed corrugated cardboard, aseptic packages, plastic-coated paper milk cartons, waxed paper, tissue, paper towels, blueprints, sepi, onion skin, fast food wrappers, carbon paper, self adhesive notes, and photographs.

² According to the California Integrated Waste Management Board, "Remainder/Composite Organic" means organic material that cannot be put in any other type or subtype. This type includes items made mostly of organic materials, but combined with other material types and does not include any subtypes. Examples include leather items, carpets, cork, hemp rope, garden hoses, rubber items, hair, carpet padding, cigarette butts, diapers, feminine hygiene products, small wood products (such as Popsicle sticks and tooth picks), and animal feces.

WASTE DISPOSAL TRENDS

Overall, *Services – Medical & Health* waste has decreased by 25,590 tons since 1990. The amount of waste disposed decreased between 1990 (124,427 tons) and 1995 (72,189 tons) and increased between 1995 and 2000 (98,837 tons). As Figure 4 indicates, the *Paper*, *Plastic* and *Other Organic* material categories demonstrate the most variation in volume between the years 1990, 1995, and 2000. Yet, *Paper* and *Other Organic* materials together comprise the majority of the industry waste stream during the year 2000 and should be targeted for waste diversion programs by businesses in this industry.

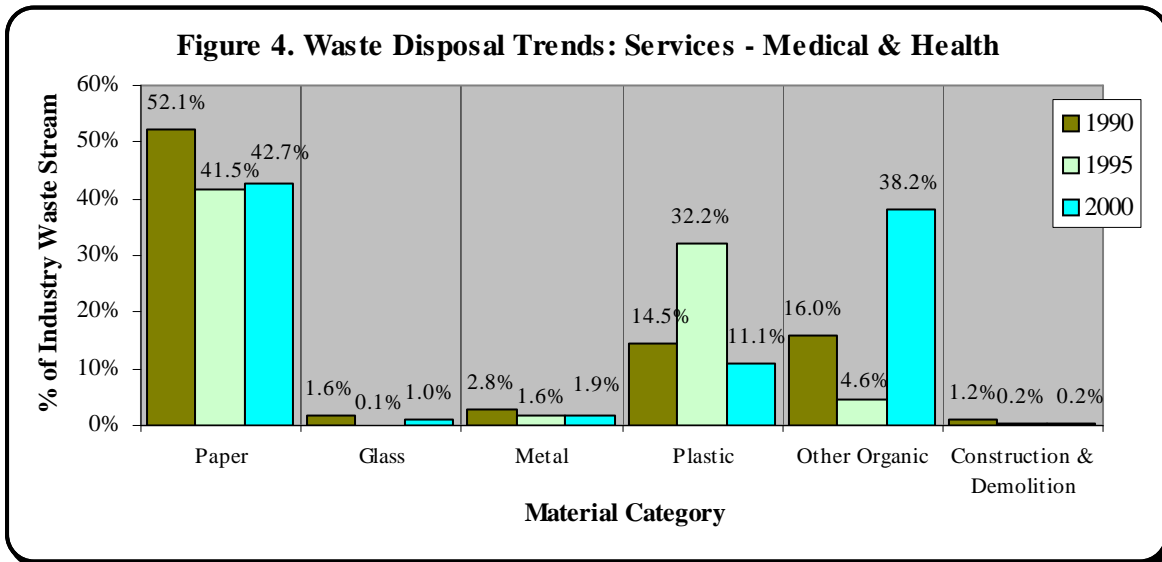
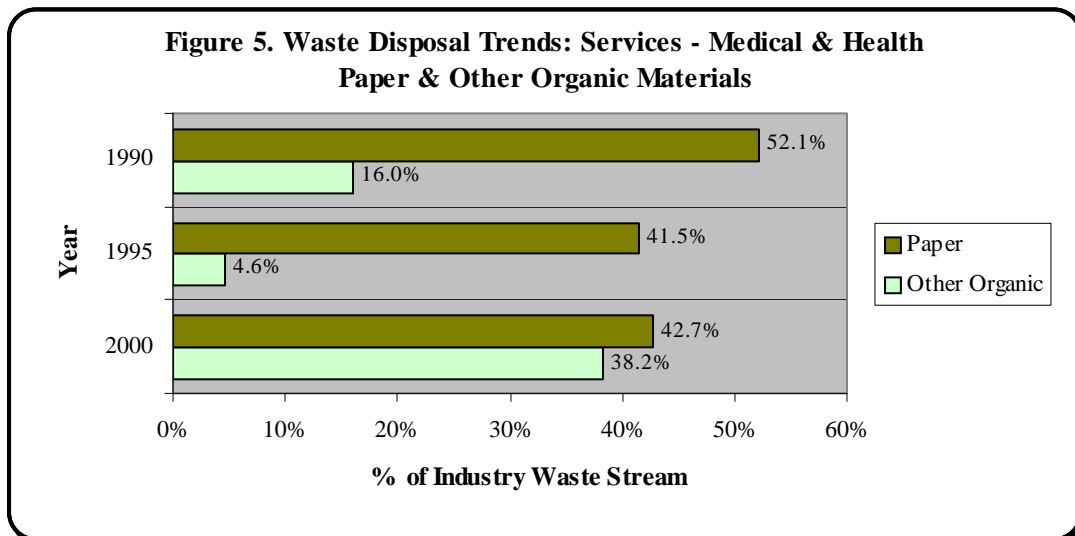


Figure 5 provides a closer look at waste disposal trends for *Other Organic* and *Paper* materials. Although substantial progress was made between 1990 and 1995 in reducing the amount of *Other Organic* materials that were landfilled, by 2000 they comprised 38.2% of the hospital waste stream. Overall, the amount of *Other Organic* materials has increased since 1990 when they comprised 16% of the waste stream, versus 4.6% in 1995 and 38.2% in 2000. Disposal of *Paper* has decreased since 1990 when it comprised 52.1% of the waste stream, versus 41.5% in 1995 and 42.7% in the year 2000, for a net reduction of 9.4% since 1990. Opportunities to divert these materials are discussed in the “Waste Diversion Tips” section that follows the section on “Waste Diversion Accomplishments”.



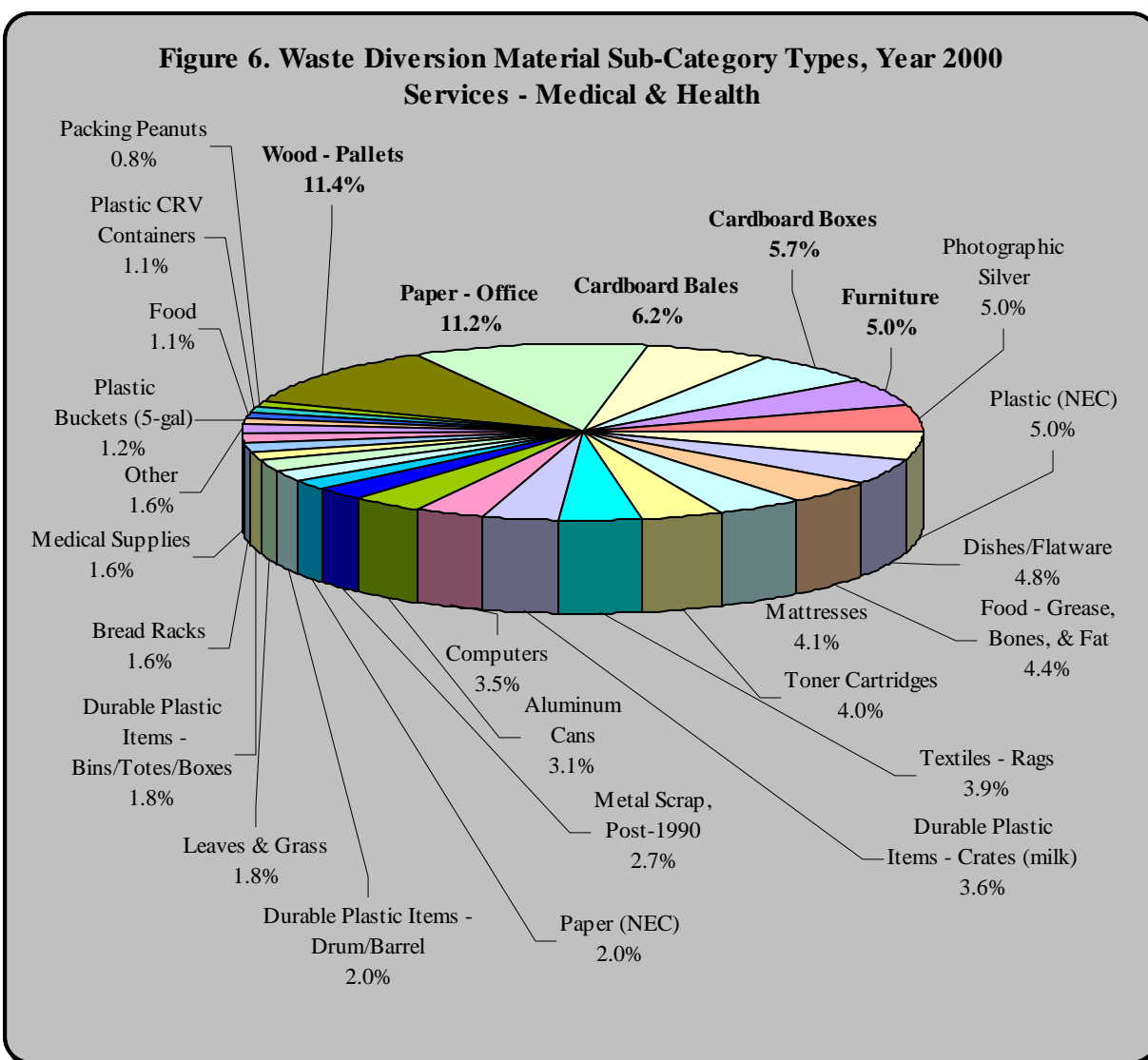
WASTE DIVERSION ACCOMPLISHMENTS

Businesses can reduce the volume of materials that are disposed in landfills, and in turn save money on disposal costs, by following the solid waste management hierarchy as set forth by the California Integrated Waste Management Board. The hierarchy sets out a preferred approach for dealing with waste. In order of preference this is:

- **Source Reduction** – preventing waste at its source by using less of a material in the first place and/or repeatedly using an item or items
- **Recycling and Composting** – *recycling*: the process by which materials otherwise destined for landfills are collected, remanufactured, and purchased; and *composting*: the biological decomposition of organic materials such as leaves, grass clippings, brush, and food waste into a soil amendment
- **Transformation** – incineration of municipal solid waste; not including composting or biomass conversion
- **Landfilling** – the process by which residual solid waste is placed in a landfill, which is a physical facility used for the disposal of residual solid wastes (trash and garbage) on the earth's surface and between layers of earth

Businesses in the City of Los Angeles have made significant accomplishments in the diversion of solid waste from landfills. The City of Los Angeles conducted waste diversion and recycling audits during the year 2000 and collected information indicating that the ***Services – Medical & Health*** industry diverts 15,660 tons of waste from landfill disposal each year through waste prevention, reuse, recycling, and composting programs. Figure 6 depicts the material sub-category types that were diverted from landfills in 2000. The top five materials diverted are Wood – Pallets, Paper – Office, Cardboard Bales, Cardboard Boxes, and Furniture.

Please note that the “Other” category is comprised of a group of material types that individually were below 1.0% of the total diverted materials. In order from most to least (by weight), these are Durable Plastic Items – Crates (Soda), Paper – Shredded, Glass – Bottles (CRV³ or Mix), and Paper – Computer. Also, Plastic (NEC) and Paper (NEC) mean Plastic and Paper, Not Elsewhere Classified.



WASTE DIVERSION TIPS

Figures 2 and 3 indicate that *Paper* and *Other Organic* materials comprise the majority of the **Services – Medical & Health** industry group waste stream. Businesses in this industry group should target these material categories for waste diversion programs through **source reduction**, **recycling**, and **composting** activities. Most materials are eligible for recycling programs in their existing forms, except for Remainder/Composite (R/C) materials, which are not. Programs for R/C materials should focus on source reduction activities, unless an opportunity to separate recyclable components of the material exists, as discussed below. Tables 1, 2 and 3 contain tips for achieving waste diversion programs for the top sub-categories (by weight) of the *Paper* and *Other Organic* material categories.

³ CRV means California Redemption Value.

Table 1. Waste Diversion Tips: Paper

R/C PAPER		TONS PER YEAR (2000): 15,948	% OF INDUSTRY WASTE STREAM: 16.1%
Source reduce	<p>Since this material is not recyclable, see the definition for R/C Paper on page 3 to identify types of this paper that your business uses, and that you can reduce or eliminate the use of.</p> <p>Prevent recyclable paper from becoming R/C Paper. Use separate containers for discarding paper and food waste. Tossing food into the same container as recyclable paper contaminates the paper, which can no longer be recycled.</p> <p>Utilize reusable drinking cups/mugs instead of paper cups.</p> <p>In employee and patient restrooms, replace paper towel dispensers with hot air hand dryers.</p> <p>Use less medical table cover paper when examining patients.</p> <p>Where possible use linens instead of disposable materials, for sheets, towels and gowns.</p> <p>Replace "Post-it notes" by using reused paper and paper clipping it to documents. "Post-its" are a contaminant for recycling because of the self-adhesive strip.</p>		
CARDBOARD		TONS PER YEAR (2000): 7,865	% OF INDUSTRY WASTE STREAM: 8.0%
Source reduce	Encourage suppliers to deliver goods in reusable containers (plastic, wood, or metal) that they take back. This practice reduces the need for disposal or recycling on your part, and may save your suppliers money, possibly reducing your costs.		
Recycle	Source-separate for recycling collection. If your business has large amounts of cardboard, obtain a baler. If your business does not generate enough cardboard to justify a baler, request a bin from your waste hauler or a local recycler. If this is too expensive, consider teaming up with other local businesses to share the costs for recycling service.		
NEWSPAPER		TONS PER YEAR (2000): 4,243	% OF INDUSTRY WASTE STREAM: 4.3%
Source reduce	<p>Use fewer newspapers by sharing between departments.</p> <p>Consider ordering the electronic instead of paper version of newspapers.</p>		
Recycle	Source-separate for recycling collection. Keep separate from food to ensure recyclability. When food is discarded with newspaper it becomes R/C Paper and cannot be recycled.		
MAGAZINES & CATALOGS		TONS PER YEAR (2000): 3,816	% OF INDUSTRY WASTE STREAM: 3.9%
Source reduce	<p>Use fewer magazines by sharing between departments or consider ordering the electronic instead of paper version.</p> <p>Utilize the electronic version of catalogs to order products and remove yourself from mailing lists that send catalogs.</p>		
Recycle	Source-separate for recycling collection. Keep separate from food to ensure recyclability. When food is discarded with Magazines & Catalogs, they become R/C Paper and cannot be recycled.		

Table 2. Waste Diversion Tips: Other Organic

FOOD		TONS PER YEAR (2000): 20,379	% OF INDUSTRY WASTE STREAM: 20.6%
Source reduce	Donate edible food to charity organizations that feed the hungry. Evaluate and adjust the size of your meal portions if they are consistently being returned unfinished. Check your produce deliveries carefully for rotten or damaged product, and let your supplier know if you are unsatisfied with the quality you are receiving.		
Recycle/Compost	Recycle food scraps and leftovers with a food waste recycler. Set up a rendering service for your waste grease, fat and/or used cooking oil.		
R/C ORGANIC		TONS PER YEAR (2000): 10,612	% OF INDUSTRY WASTE STREAM: 10.7%
Source reduce	Since this material is not recyclable, see the definition for R/C Organic on page 3 to identify types of this paper that your business uses, and that you can reduce/eliminate the use of.		
Recycle	Consider separating and recycling the recyclable parts of the material.		
TEXTILES		TONS PER YEAR (2000): 4,958	% OF INDUSTRY WASTE STREAM: 5.0%
Source reduce	Use more durable textiles that last longer to reduce waste. Donate used linens (sheets, towels, and gowns) to charity groups.		
Recycle	Source-separate for recycling collection.		

OTHER WASTE DIVERSION IDEAS

Even though the following materials are not part of the top material sub-categories, some comprise a large portion of the waste stream and should be targeted for waste diversion programs. Consider the waste diversion tips in Table 3 below.

Table 3. Other Waste Diversion Ideas

ITEM	SUGGESTED ACTIONS
X-Ray Film	Source-separate for recycling collection.
Photographic Silver	Source-separate X-Ray developer sludge for recycling collection.
Film Plastic	Use, or ask vendors to use large "rubber bands" instead of shrink-wrap to keep items secured on pallets. Reuse shrink-wrap as padding in shipments. Recycle the stretch wrap used to secure boxes and supplies on pallets, damaged bags and other scrap plastic.
Paper	Source-separate white ledger and other office paper for recycling collection. Shorten or consolidate admission, discharge, and other forms to only what is necessary. Use electronic means for all paperwork to reduce mistakes in the area of patient care and reduce the large volume of paperwork traditionally used for patient care. Keep as much information filed on computers. Practice double-sided photocopying, especially when patients request their records.
Green Waste	If your facility has a lawn, reduce grass trimmings by leaving clippings directly on the lawn instead of bagging them for disposal. Not only will this reduce waste, but it will also lead to a healthier lawn by returning nitrogen to the soil. Landscape using plants that grow slowly or have enough space so they do not need to be constantly trimmed.
Pallets	Reuse pallets or ask suppliers to take them back. Store excess pallets on site for collection by a pallet reuse company.
Toner Cartridges	Send computer printer and photocopier toner cartridges back to the vendor for re-manufacturing.
Plastic	Use pump dispensers — pre-measured to recommended amounts — for chemicals, sanitizers, soaps, lotions, and other appropriate products. Usage of these materials, along with packaging waste, can be significantly reduced.
Equipment and Scrap Materials	Donate salvageable medical equipment, mattresses, and office furniture to local or international charity organizations. List available items for donation on the County of Los Angeles' materials exchange web site, LaCoMAX, at http://ladpw.org/epd/lacomax/ . Also, contact L.A. Shares at 213-485-1097 for donation information.
Food Service Items	Provide reusable flatware, plates, glasses, and mugs in dining areas instead of disposable paper and plastic utensils, especially if you have a dishwasher. Consider using biodegradable forks, spoons, and knives; as well as plates. Not only are these items better for the environment, but they can also be incorporated into a composting program, if you choose to implement one.
Beverage Containers	Encourage employees to use their own mugs for "to go" beverages by offering financial discounts. Recycle aluminum cans and plastic & glass bottles.
Diapers	Use cloth diapers instead of disposable diapers.
All Items	Encourage service companies to improve their waste diversion methods and programs. For example, hospitals can mandate recycling and waste reduction programs through contractual agreements.
Recycled-Content Products	Purchase recycled-content products, such as office paper, toner cartridges, toilet paper, and paper towels. If too expensive, join a buying cooperative program to reduce costs. Contact the City for more information on recycled-content products.
Construction Materials	For construction projects, mandate recycling and waste reduction in contracts. Items that can be recycled include lumber, metal, drywall, asphalt, and concrete.

RECYCLING TIPS

INCREASING THE AMOUNT OF RECYCLABLE MATERIALS

- Keep food and other contaminants separate from materials that are recyclable. For example, when food is discarded with paper, it becomes R/C Paper and cannot be recycled.

LARGE QUANTITIES OF RECYCLABLE MATERIALS

- Determine the materials with the largest volumes of waste and target them for recycling. The greater volume of materials you generate, the more likely you are to be paid for the materials.

SMALL QUANTITIES OF RECYCLABLE MATERIALS

- If you have recyclable materials in small quantities, consider paying for recycling collection as long as the cost is less than what you pay for waste disposal. Your company will “make money” by reducing its waste disposal costs.
- Consider teaming up with other businesses in your area to share recycling service costs and revenues.

WHEN RECYCLING COLLECTION SERVICES ARE NOT AVAILABLE

- If recycling collection services are not available from your waste hauler or recyclers, work with employees or local individuals to collect and transport recyclable materials from the business.

POLICIES THAT BUSINESSES CAN IMPLEMENT

Policies that will help businesses to implement and uphold waste diversion programs include:

- Develop and commit to responsible solid waste management plans with emphasis on source reduction and recycling activities.
- Continually monitor the effectiveness of solid waste management programs facility-wide and in individual departments.
- Dedicate the necessary funding and personnel resources to ensure the ongoing success of waste diversion programs.

MEASURES PROPOSED BY THE CITY OF LOS ANGELES

In addition to programs and policies that businesses can implement on their own, the City proposes to provide the following support services to help the *SerVICES – Medical & Health* industry to divert waste from landfills:

- Technical assistance to businesses expressing an interest in developing and implementing effective waste diversion programs.
- Publicly recognizing and promoting businesses that demonstrate high solid waste diversion rates and a strong commitment to waste diversion.
- Establishing a working relationship with industry-related associations such as the Healthcare Association of Southern California for the purposes of enhancing training programs and communicating plans and progress with waste diversion programs.
- Assisting in the design of tracking programs for the purpose of documenting waste diversion programs.
- Tracking and monitoring industry disposal and diversion rates through periodic sampling and surveying of businesses and biannually re-evaluating waste diversion opportunities.
- Identifying sources of recycled-content products for the industry and providing guidelines for purchasing contract modifications that support procurement of recycled products.

CASE STUDY PROVIDENCE HOLY CROSS MEDICAL

Address:	15031 Rinaldi Street Mission Hills, CA 91345	Type of Business:	Health Care Facility
		SIC Major Group:	80
		Employees:	1,200
Contact Person(s):	Anthony Rogers	Trash Hauler:	Blue Star/Atlas
Contact Number:	(818) 365-8051		Consolidated
		Recycler(s):	See below.

BUSINESS OVERVIEW

As a large company with 1,200 employees, Providence Holy Cross Medical (Providence) has made recycling and reuse central components of their waste management policy.

MATERIALS RECYCLED / DIVERTED

The following table presents the ten materials that Providence diverts from landfills through recycling and reuse activities on an annual basis. In addition, Providence minimizes waste through source reduction activities including purchasing food service supplies in bulk, utilizing a linen laundering service, and providing reusable dinnerware and utensils for patients.

MATERIAL	ANNUAL TONS	RECYCLER	DESCRIPTION
Aluminum cans	0.5	N/A	Donate cans to the Kiwanis Club for recycling
Cardboard	52	BLT Recycling	Recycle 5 (200 lb.) bales per week
Computers	3.9	N/A	Donated 300 person computers to charity groups
Mattresses	0.8	N/A	Donate to local charity groups
Packing Peanuts and Film Plastic	0.018	BLT Recycling	Source-separate packing peanuts and film plastic for recycling collection.
Wooden Pallets	51.1	N/A	Reused in-house and excess pallets are returned to vendor
Office Paper	7.2	BLT Recycling	Source-separate for recycling collection
Photographic Silver	0.02	Merry X-Ray Chemical Co.	Recycle 20 lbs. X-Ray developer sludge every two months
X-Ray film	6.72	N/A	Recycle one barrel (1,120 lbs) of x-ray films per month
Toner Cartridges	0.3	N/A	Buy recycled toner cartridges and send out used ones for recycling
TOTAL	122.558		YEAR 2000

COST SAVINGS / REVENUE

A cost savings / revenue estimate for the waste reduction programs is not available.

SUMMARY OF RESULTS

Through its commitment to recycling, Providence diverts approximately 123 tons of materials from landfill disposal on an annual basis. As detailed above, the health care facility makes significant contributions in efforts to increase solid waste diversion rates at the local level.