

What Is Waste Prevention?

New York City boasts nine major sports arenas, as well as numerous City-owned and operated facilities, such as Parks and Recreation ice arenas, and college and university sports facilities.

In addition, about 100 facilities in New York City host more than 750 conventions, conferences, exhibitions, and trade shows per year, serving more than 3.3 million convention guests. All of the activities taking place in stadiums, arenas, and convention centers offer opportunities to reduce waste and make operations more cost efficient.



Incorporating reusable totes into your distribution system can reduce both purchasing and disposal costs.

The secret is found in a common message: "All waste is lost profit."

So what is waste prevention in the context of operating and managing a public assembly facility in New York City? Waste prevention means reviewing and changing those practices that result in wasted supplies, wasted food, and discarded packaging. It means implementing systems that eliminate waste including paper and cardboard.

continued on page 4



Unused event-specific literature awaits disposal after a trade show. Simple production changes can help to reduce this waste.

Waste Prevention Tips for Event Planners and Exhibitors

Large facilities can do a lot to reduce waste generation, but only up to a point. In convention and conference facilities, every event involves providing information to the groups who organize events to the individuals who attend. You can add information about waste prevention and recycling measures to the information already pro-

vided by your facility. For example, show or event planners receive manuals of all the information they need to host a successful event. Vendors and exhibitors receive similar information about such things as electricity hookup and catering services.

Adding some of the following suggestions can help you to reduce waste in your facility, thereby reducing your cost to host the event, as well as help make events run smoothly and efficiently. Pass these waste-cutting, cost-saving suggestions along to event planners and exhibitors.

Literature Production and Distribution

- Ship literature in reusable crates. Crates can be collapsible for easy transport and can be used to ship unused materials back to your company or on to the next show.
- Print literature and other written material double sided whenever possible.
- As a reference for printing materials for future events, track the quantity of literature distributed, rather than quantities purchased or printed.

continued on page 3

Donate Your Way to Cost Savings

Businesses throughout the City effectively reduce the cost to manage and dispose of unneeded items by donating usable material and edible food to receiving organizations. Donors also are eligible for tax deductions when donating items to not-for-profit organizations.



Chairs await collection by Materials for the Arts, a non-profit organization that makes hundreds of tons of donated goods available to cultural, health, community, and educational organizations.

Organizations donate thousands of tons of nutritious, edible food every year to food collection programs in the City. Still, despite the fact that hundreds of organizations participate in the various donation programs, there are many more not taking advantage of this cost-effective method of reducing the

continued on page 4



DISCLAIMER:
NYCWasteLe\$\$ is funded by the New York City Department of Sanitation, the New York State Energy Research and Development Authority, and the United States Environmental Protection Agency. This document may not reflect the views of these Agencies and no official endorsements should be inferred. Vendors or organizations mentioned do not constitute a complete list of products or services available.

In Partnership With:

• The Association for Resource Conservation • Aramark Corporation • Bell Atlantic • Blue Ridge Farms, Inc. • The Brerley School • British Airways • Bryant Park Restoration Corporation • Con Edison • Council on the Environment of NYC • Culinary Institute of America
• D'Arigo Brothers of New York, Inc. • D. M. Rothman Company, Inc. • Delphi Studios
• Eagle Electric Manufacturing Company, Inc. • East Williamsburg Valley Industrial Development Corporation • Empire State Development Corporation, Environmental Management Investment Group • Empire State Restaurant and Tavern Association • Food Industry Alliance of New York • Food Marketing Institute • Grand Central Partnership • Greater Jamaica Development Corporation • Greater New York Hospital Association • Hotel Association of New York City • Industrial Development Corporation of East New York • Jacob Medical Center • The Jacob K. Javits Convention Center of New York • Hunts Point Terminal Produce Market
• Long Island City Business Development Corporation • Met Food • New York City Board of Education • New York City Department of Business Services • New York City Department of Parks and Recreation • New York City Trade Waste Commission • New York Convention & Visitors Bureau • New York Hospital • New York State Restaurant Association • Pizzeria UNO
• The Port Authority of New York & New Jersey at LaGuardia • Public School 48, Bronx
• Shea Stadium • Sheraton New York Hotel and Towers • ShopRite • Sign City • South Street Seaport • Staten Island University Hospital • 34th Street Partnership • US Airways at LaGuardia
• Volume Services America, Inc. • Wakefern Corporation

Inside Look:

What Is Waste Prevention?	1
Waste Prevention Tips for Event Planners and Exhibitors	1
Donate Your Way to Cost Savings	1
Toxicity Reduction Prevents Waste	2
Advances Continue in Recycled Product Market	3
WasteLe\$\$ Partners In Action: Javits Center Gives to the Arts	4
Joining EPA's WasteWise Program	4

Spotlight On: Waste Prevention

FEEDBACK... Tell Us What's On Your Mind. We would like to hear from you. Please take a few minutes to let us know: (1) if you find the information provided in *NYC WasteLe\$\$* useful (2) what waste prevention, recycling, and energy efficiency topics you would like to learn more about and (3) any other thoughts and comments, including your own waste prevention, recycling, and energy conservation success stories. Simply write to us at *NYC WasteLe\$\$*, NYC Department of Sanitation, 44 Beaver Street, 6th Floor, New York, NY 10004, or you may fax information and comments to us at (212) 837-8255 (attention: *NYC WasteLe\$\$*). Thank you for your input.

Toxicity Reduction Prevents Waste

Some cleaning products commonly used in graffiti removal operations and the cleaning of restrooms can pose health hazards to your staff, and to those who handle your waste after it is removed. Paint and paint thinners also can contain harmful substances. When compared to traditional products that serve the same purpose, environmentally preferable cleaning and maintenance products have a reduced impact on human health and the environment.

Take a close look at the products used in your daily operations to identify opportunities to consider testing and switching to alternative products. Look on your shelves, review the material safety data sheets (MSDSs), and talk to staff. You may be surprised at what you find. For example, review the ingredients in products used to disinfect restrooms and you may find these products contain ammonia.



Low-VOC paints, which reduce air pollution and the risk of worker exposure, are available from several major manufacturers.

Are Your Employees Informed?

Material safety data sheets (MSDSs) are mandatory information sheets that accompany all potentially toxic products and materials. The Occupational Safety and Health Administration (OSHA) requires that MSDSs be readily available to all staff using or handling the materials. Each MSDS contains pertinent information about the material's or product's ingredients, its harmful characteristics, and how to respond to spills, accidental contact, and other exposure. An MSDS can provide life-saving information, as well as data about using the product safely and most effectively.

Disinfectants and other cleaners can be replaced by alternatives that offer the same performance standards. For example, the Enviro Solutions company produces a washroom cleaner with envirocide odor eliminator for daily cleaning of sinks, showers, and urinals.

When considering switching to a reduced toxicity product, check the labels of your current products to see whether they contain any of the chemicals listed in the box below: Targeting Toxics. This list is not comprehensive, but includes some of the more common, toxic chemicals found in cleaning and maintenance products.

TARGETING TOXICS	
Common Toxic Chemicals Found in Cleaning and Maintenance Products Targeted by the U.S. EPA for Reduction or Elimination	
Acetone	Aluminum oxide
Ammonia	Benzene
Carbon Tetrachloride	Chloroform
Ethyl benzene	1,2-Dichloroethane
Ethylene glycol	Freon 113
Glycol ethers	Hydrochloric acid
Lye	Methyl ethyl ketone
Methyl isobutyl ketone	Methanol
Methylene chloride	Naphtha
Phenol	Sodium hydroxide
Sulfuric acid	Tetrachloroethylene
Toluene	Trichloroethylene
1,1,1-trichloroethane	Xylene

When environmentally preferable products were first introduced, as with any new product, some were not as effective as the products they were meant to replace. However, based on approximately thirty years of research, many environmentally preferable cleaning and maintenance products now meet all of the same standards as traditional products. In addition, most vendors will ship samples so that you can test the effectiveness of the product before making a purchasing decision.

While you may not be able to find environmentally preferable cleaning and maintenance supplies for all your needs, alternatives to traditional cleaning supplies are available. Everyday new products are introduced to the market that have eliminated constituents of concern such as 1,1,1-trichloroethane, toluene, and methyl ethyl ketone.

Consider the following benefits of using environmentally preferable cleaning and maintenance products:

- May be less expensive than traditional supplies.
- May help reduce worker exposure to harmful chemicals, reduce the number of sick days taken by workers, increase worker productivity, reduce workers' compensation claims, and improve compliance with OSHA regulations.
- May reduce the quantity of toxins going down your drain, which may help you to comply with wastewater treatment permit requirements.
- May help to reduce customer exposure to certain chemicals, thus reducing the potential for adverse reactions.

Green Seal, an independent, nonprofit organization that promotes the manufacture and sale of environmentally responsible consumer products, sets environmental standards and awards a "Green Seal of Approval" to products that cause less harm to the environment than other similar products.

Green Seal-recommended "green cleaners" must satisfy the following criteria: non-toxic to humans and aquatic life; pass specific aquatic toxicity tests; phosphate and phosphonate concentrations must be less than 0.5% by weight; biodegradable; work optimally when diluted with cold water; and packaged as a concentrate in recyclable/refillable containers with post-consumer recycled content. For more information, visit Green Seal's web site at www.greenseal.org or call (202) 872-6400.

Environmental Attributes To Consider When Selecting Cleaning and Maintenance Products:

- Irritation potential
- Chronic health risks
- Time to ultimate biodegradation
- Bioconcentration factor
- Percentage of volatile organic compounds
- Presence of ozone depleters
- Potential exposure to the concentrated cleaning solution
- Flammability
- Presence of cosmetic additives
- Energy needs
- Amount of product packaging

Source: Cleaning Products Pilot Project, U.S. EPA, 1997

Many web sites highlight environmentally preferable cleaning supplies, with product descriptions and information on the environmentally preferable substitute for particular hazardous chemicals.



Defense Logistics Agency
www.dscr.dla.mil/products/epa/eppcat.htm
 Although the DIA site was designed for military customers, its information is valuable and accessible to the commercial sector, as well. You can request a hard copy of the list of product substitutes by calling (800) 345-6333.

Joint Service Pollution Prevention Technical Library
<http://enviro.nfesc.navy.mil/p2library>
 This site offers anyone information about less toxic alternative products and services.

New York State Department of Environmental Conservation, Pollution Prevention Unit
Environmental Compliance and Pollution Prevention Guide for Small Quantity Generators
www.dec.state.ny.us
 This guide offers a straightforward summary of regulations for air, water, and hazardous waste. Call (800) 462-6553 or visit their website.

U.S. General Services Administration
Commercial Cleaning Supplies
 This catalog lists hundreds of commercially available, environmentally preferable cleaning supplies.
 Call (800) 241-7246. ■

Advances Continue in the Recycled Product Market

In addition to preventing waste at the source of generation, guaranteeing that reused and recycled products are incorporated into business practices is a key component in improving efficiencies in business. Comparing the original *Official Recycled Products Guide*, published only a decade ago by American Recycling Market, Inc., to the myriad publications and on-line resources available today, one can quickly see the advances achieved in the recycled-products industry.

Innovative manufacturers and product engineers have improved recycled material processing technologies and developed new systems to create products from an expanding variety of recyclable materials. Traditionally, consumers tend to think of paper when they think of recycled-content products. But in the past decade, entire industries have sprung up around manufacturing recycled products.



The New York State Aquarium installed EConights™ recycled rubber flooring (Photo courtesy of Dodge-Regupol, Inc.).

Today, there is a wide variety of high-quality, cost competitive products made from recycled material. For example, if you are replacing the floor covering inside your facility, consider installing Dodge-Regupol

Eco-Surfaces rubber flooring made from 100 percent recycled rubber. Thirty-four colors and patterns soon will be offered, according to *Environmental Design & Construction* magazine. When replacing crumbling parking stops in lots and garages, consider recycled-plastic parking stops, made from old carpet fibers. Several new Rubbermaid recycled plastic trash and recycling receptacles

are made with post-consumer recycled-content material. Even the clothing your facility staff wear can be made with recycled materials. You may want to consider fleece pullover jackets, sweatshirts, and T-shirts made from recycled PET soda bottles, when purchasing new uniforms.



FOR MORE INFORMATION:

For additional information on sources of recycled-content products, specification criteria, and product evaluations check the following:

- Buy Recycled Alliance of New York (518) 292-5340
- U.S. EPA's Comprehensive Procurement Guidelines www.epa.gov/epaoswer/non-lw/procure/index.htm RCRA Hotline (800) 424-9346

- U.S. General Services Administration www.pub.fss.gsa.gov/enviro/ (817) 334-5215
- California Integrated Waste Management Board www.ciwm.ca.gov/rcp/rcpd/bint.htm — California's Recycled-Content Product Database (916) 255-2708
- U.S. Green Buildings Council — a non-profit coalition providing green building information. www.usgbc.org

- King County Department of Natural Resources, Solid Waste Division www.metrokc.gov/procure/green — King County's Environmental Purchasing Program www.metrokc.gov/greemworks/products.pdf — a recycled-content building materials resource. (206) 296-6542
- Green Building Resource Guide — a database for purchase of more than 600 building materials and products with recycled-content material. www.greenguide.com Fax request for guide to (650) 364-5116.

Tips continued from page 1

- large quantities of printed literature are never distributed and are left behind as trash after the show.
- Estimate the quantity of literature needed for an event based on actual distribution at previous shows. Ration the literature distributed rather than producing more. Do not bring extra; it only costs you more and becomes waste later.
- Provide computer disks instead of printed hand-outs or provide information about on-line information sources if possible. This reduces the amount of paper waste generated and saves you money in printing, paper purchases, and shipping.
- Consider producing literature that is not dated or event-specific so that it can be used at other events.

Shipping Display Materials

- Package displays to be shipped to the facility using wooden crates and blankets when feasible instead of packaging with foam sheets and bubble wrap, and transporting in cardboard boxes.
- Save any necessary bubble wrap and foam sheets for repackaging displays after the event; do not use polystyrene peanuts for packing material. Store reusable packing materials in empty crates.
- Ship materials in large containers instead of many

more smaller containers. Since most material is moved with forklift or handcart, larger boxes are more efficient and create less packaging waste than smaller ones.

- Reuse packing materials, carpeting, padding, and other materials at other events.

Extras

- Rent flower and plant arrangements that can be taken back by the florist after the show, rather than arrangements that are made specifically for the event and are discarded.
- If you rent furniture for your booth, request that it be delivered in blankets instead of in bubble wrap or some other type of disposable packing material.
- Reduce the number of promotional items you give away at your booth or exhibit. Think carefully about the items you do distribute. Will people keep them? Do they relate to the product or service you are trying to market?

You may not wish to incorporate all of these into your literature, or you may have some additional ideas for your facility. Getting people thinking about reducing waste and the ways that it can improve efficiency is the first step. ■

King Dome Cuts Costs Using Durable Recycled Plastic Lumber

The King Dome in King County, Washington, has discovered the benefits of recycled plastic lumber. In 1993, Tony Guerrero, former Maintenance Superintendent at the facility, and his staff, tested a 100 percent recycled, commingled plastic lumber product as an alternative to treated wood channel boards used to hold down artificial turf on the stadium playing field.

At the Dome, the edges of the artificial turf are dropped into a channel cut in the concrete floor, where, in the past, it was secured with wood wedges. The wedges were hammered into place using sledge hammers and pried out with crowbars. When water got into the channels, the wood would swell and rot, causing the staff to need to replace the wood several times a year.

When recycled plastic lumber was first introduced to replace the wood, carpenters were skeptical. However, they soon found that the plastic lumber could be mitered like natural wood, and withstood hammering better than natural wood. After testing the product, the facility ended up purchasing 1,500 linear feet of recycled plastic wood.

According to the King County Environmental Purchasing Program, during the initial project in 1993, carpenters installed 214 4"x4"x8' boards, which cost \$16.91 each. Over the course of the year, 160 maintenance hours were eliminated for a cost savings of \$3,520. In addition, the facility saved \$1,600 in replacement costs, for a total annual savings of \$5,120.

The plastic lumber is still being used at the King Dome today, and an additional 75 boards were purchased in 1998 for \$15.50 each. "It is not that much more expensive than regular lumber," says current Maintenance Superintendent, Bobby Richards. "The durability is really what makes it a bargain."

"We were spending \$5,000 to \$8,000 on lumber each year, and since we installed the plastic lumber, we haven't replaced any yet. We are using it for signposts and handicap parking signs now too," says Mr. Richards. "We buy small quantities of it to have on hand in case someone runs over a piece with a forklift, but it does not deteriorate in the weather like wood does."

The project has since inspired the Metrodome in Minneapolis, MN, and B.C. Place, in Vancouver, B.C., to begin using recycled plastic lumber. Mr. Richards also has shared his successes with the management for the new stadium to be built on the site of the King Dome in the coming year. When the King Dome is torn down next year, some of the materials, such as several hundred recycled-plastic bumper stops, will go to county parks for reuse.

For more information, contact Bobby Richards, Maintenance Superintendent for the King Dome, at (206) 296-3155. The company currently supplying the recycled plastic lumber is EnviroWood in Auburn, AL at (888) 357-8392. Their web site is www.envirowood.com.

Additional products that may be specified with recycled content include:

Construction and Facilities Maintenance Products

- Trash bags
- Restaurant furniture
- Carpeting
- Rubber mats
- Marble floor tiles
- Insulation
- Latex paint
- Bench seating & tables
- Wallboard

Landscaping Products

- Planters
- Garden and soaker hoses
- Concrete

Donate Your Way continued from page 1

quantity of edible food destined for disposal and the opportunity to join forces to help hungry New Yorkers.

According to Julia Erickson, Executive Director at City Harvest, "In 1998, City Harvest picked up 10 million pounds of food. This is estimated at only 20 percent of all the food that is wasted in our City."

In addition to removing edible food from the waste stream, facilities purchasing new furniture, appliances, and other equipment can reduce the quantity of waste carted for disposal. Usable items may find a new life at a local non-profit, school or other orga-

Fear of Liability — Not Necessary

New York City organizations that donate food in good faith are protected, under Federal law, by The Bill Emerson Good Samaritan Food Donation Act. In 1981, New York State enacted Article 4-D, Section 71-Z, "Liability for Canned, Perishable Food or Farm Products Distributed Free of Charge." Many collection organizations also have implemented safe food handling procedures to further protect donors and recipients. Fear of liability is no longer an issue for those who wish to make good faith food donations.

nization in need. Businesses across the City benefit in several ways: 1) eliminating the cost of disposing of unwanted items 2) reducing the burden on landfill capacity and 3) spreading goodwill and enhancing their positive public image.

Each year, a many non-profit organizations in the City facilitate the exchange of usable, high-quality items between public assembly facilities and receiving organizations. According to Susan Glass, Director of Materials for the Arts (MFA), 514 tons of materials, worth an estimated \$3 million, were donated through the organization during New York City's fiscal year 1999. MFA, a program sponsored by the New York City Department of Cultural Affairs in partnership with the Department of Sanitation and the Board of Education, makes the items available to a variety of groups. These include New York City-based, non-profit cultural organizations; health, social and community service organizations; schools; and City agencies. Donations from about 830 donor businesses have benefited more than 1,300 recipient organizations.

The next time you are about to discard edible food or usable material goods, consider contacting one of the many charitable organizations throughout the City. Many organizations offer guidelines, donation packaging and tax advantages. Save money while helping others.



FOR MORE INFORMATION:

Food Donations:

- City Harvest, Inc. – (212) 463-0456, fresh, prepared, and packaged foods.
- Food for Survival Food Bank – (718) 991-4300, canned and packaged foods.
- Island Harvest (Long Island) – (516) 294-8528, fresh, prepared, and packaged foods.

Materials Donations:

- Goodwill Industries of Greater New York, Inc. – (718) 728-5400, accepts clothing furniture, and furnishings.
- Helping Hand Community Center – (212) 722-0400, accepts anything, and will pick up.
- Materials for the Arts – (212) 255-5924, accepts almost anything in usable condition with at least one week notice, and will pick up.
- New York WaSteMatch – (212) 240-6920, helps identify potential users of waste materials.
- NYC Stuff Exchange (contact the Sanitation Action Center at (212) 219-8090 for more information), toll-free telephone system with listings of reuse outlets in the City.
- Salvation Army – (212) 337-7200, accepts clothing, furniture, furnishings.
- St. Vincent de Paul Society – (718) 292-9090, accepts clothing, furniture, furnishings.
- United Way of New York City – (212) 973-3800, accepts office furnishings and equipment.
- Wilson Major Morris Community Center – (212) 234-4661, accepts almost anything, and has limited collection service.

For additional organizations and ideas, contact the Sanitation Action Center at (212) 219-8090, and ask for *Reuse It, Repair It, Rent It — But Don't Throw It Away!* ■

NYC WasteLe\$\$ In Action

Javits Center Gives to the Arts

The Jacob K. Javits Convention Center, on the west side of Manhattan, donated 60 rolls of carpet and carpet padding and 250 chairs to Materials for the Arts in 1998. Donating these items removed approximately four tons of waste from the trash stream of the largest convention and trade show facility in the City and passed along more than \$33,400 worth of goods to needy organizations. Recipients of the carpeting and chairs included local schools, theater groups, dance groups, artist foundations, cultural centers, hospitals, and many others.

Along with the donations made to Materials for the Arts and directly to schools, the Javits Center also diverted 28 trailer loads of pallets (or approximately 12,600 pallets or 315 tons) from the waste stream for reuse or repair. These bulky items would have cost the Javits Center thousands of dollars to dispose and, at a value of several dollars per pallet, salvaging them makes good business sense. Through these donation and reuse efforts, the Javits Center has been able to reduce the number of open-top roll-offs needed to collect waste and to manage waste more efficiently with compactors.

What Is... continued from page 1

food and other organic materials, plastics, spent batteries, and pallets and wood; conserving energy; and reducing toxicity.

In many cases, waste can be eliminated by using more durable items, or reusable products rather than disposables. Waste also can be prevented by changing ordering schedules to minimize spoilage or to take advantage of bulk purchasing.

Regardless of the size and type of your facility, there are new ways of doing your job in a "less wasteful" way. Keep in mind, waste prevention is as much about what you buy as it is about what you throw away. It also is about when you buy, and how you use what you buy. Keep an eye on what fills your dumpsters each day or over a week, and ask yourself if *and how* that wasted material could have been prevented. You also can review the type and amount of packaging waste that you pay to dispose each month, and ask yourself if you could specify alternative packaging that would help you to reduce waste and, therefore, lower your trash bill.

Essentially, waste prevention is inventorying the waste in your operation and taking deliberate steps to eliminate it. In this issue of *NYC WasteLe\$\$*, we present strategies and success stories of waste prevention; reducing waste at its source, before it is even generated. Preventing waste saves money, saves time, and conserves resources. It makes good business sense. ■

NYC WasteLe\$\$ Program
P.O. Box 1156
Bowling Green Station
New York, NY 10274-0156

Joining EPA's WasteWise Program

The U.S. Environmental Protection Agency's WasteWise program can provide a framework for your waste prevention program and other waste reduction efforts. WasteWise is a free, voluntary partnership program that encourages organizations to reduce waste through waste prevention, recycling, and buying or manufacturing products with recycled content. WasteWise provides partners with technical assistance, publications, and public recognition opportunities. WasteWise

partners saved an estimated \$26 million in avoided disposal costs in 1997, and avoided paper purchasing costs for all the program's partners in 1997 could be as high as \$60 million, according to the Fourth Year WasteWise Progress Report, published by U.S. EPA in September 1998.

For more information, visit the WasteWise Web site at www.epa.gov/wastewise or call the WasteWise helpline at (800) 372-9473 for a free information packet.

Bulk Rate
U.S. Postage
PAID
Brooklyn, NY
Permit #21899