



# A Waste Prevention and Recycling Guide for Businesses and Institutions



Tips For Starting Successful  
Recycling Programs,  
Cutting Waste,

How to Conduct Waste Audits

# Welcome!



Let us show you how your business can reduce waste, save money and improve efficiency by implementing a commercial waste reduction program. In this booklet, you'll find lots of ideas and tips for successful recycling cutting waste, conducting a waste audit and more.

Please feel free to use all of these tips, as well as your own ideas, to help your business and improve our environment at the same time.

For more information, contact the:

**Solid Waste Management Department  
County Center  
601 E. Kennedy Blvd., 24th floor  
Phone: (813) 272-5680**



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# An Introduction To Waste Prevention

**Waste prevention**, also known as source reduction, is one of the most effective ways of managing the municipal solid waste stream. It aims to reduce the volume, weight and toxicity of products that will eventually end up in the trash.

The public and private sectors, including government offices, commercial enterprises, industry and institutions, generate 60 percent of the municipal solid waste stream. As waste disposal costs continue to rise, they will have a greater impact on these organizations than on individual residential households.

In unincorporated Hillsborough County, there is a **Solid Waste Profile Program** aimed at identifying and pre-screening all non-residential solid waste accepted for disposal. All commercial and/or industrial solid waste generators should apply to the Solid Waste Management Department and obtain approval to dispose of their waste in the County's solid waste system.

A well-planned and well-executed waste prevention program can have a significant impact on reducing commercial purchasing and waste disposal costs. Additional savings may also be realized from more efficient operations resulting from the waste prevention and reduction process.

## Waste Reduction

There are three elements to waste reduction:

**Recycling** -- the collection, sale and remanufacturing or reprocessing of materials which would otherwise be disposed of as garbage

**Reuse** --- the reuse of previously used items in their original form, i.e. no processing necessary

**Composting** --- the process of converting organic, bio-degradable material into a nutrient-rich, soil-like material

# Waste Prevention and Reduction Tips

- Where practical and available, order products with recycled content. This reinforces the viability of recycling and strengthens markets for recyclable materials.
- Reduce or eliminate types of material that:
  - make up the bulk of your organization's waste stream
  - have excessive or unnecessary packaging
  - have a negative environmental impact (i.e. - toxic waste/byproducts)
- Choose and request reusable packing for supplies and items that are bought, produced, and distributed by your business.
- Order in bulk for supplies with a long shelf life.
- Use and request refillable/ reusable containers and reusable pumps/ dispensers where appropriate.
- Before discarding surplus, leftover or reusable materials, explore the possibility of donating them to non-profit organizations or selling them to other businesses.



## **The implementation of waste reduction strategies:**

- Avoids incineration, landfilling and recycling costs
- Conserves natural resources
- Reduces pollution
- Reduces waste disposal costs
- Produces savings from the adoption of more efficient purchasing, packaging and work practices indicated by an examination of waste prevention and reduction principles



# Commercial Recycling

## Why Recycle



Reducing waste through recycling:

- Projects a positive corporate image
- May reduce waste disposal costs
- May generate revenue from the sale of recycled materials
- Is environmentally and socially responsible
- Conserves limited natural resources
- Conserves landfill space
- Produces energy savings and reduces pollution

The use of recovered materials instead of virgin materials in many manufacturing processes requires less energy and reduces the potential for pollution

## Pre-requisites for a Successful Recycling Program

- ✓ Management support
- ✓ An enthusiastic and committed Recycling Team Leader
- ✓ A Waste Audit
- ✓ A hauler and market for the recyclables
- ✓ Physical space for recycling containers
- ✓ An initial and ongoing educational program on the recycling system

# Implementing A Recycling Program

- Conduct a waste audit to gather basic information about the waste stream --- its composition, volume and disposal costs.

Many businesses will be able to identify easily which materials can be recovered from their waste stream for recycling, without doing a waste audit. However, the audit can yield valuable data that will assist in the development of an effective waste reduction and recycling program.

- Based on the information obtained in the waste audit, work out the mechanics of the proposed program:
  - What materials will be recycled?
  - Estimate start-up and ongoing costs
  - What equipment will be needed? How many containers, compactors, crushers, dumpsters?
  - Where will equipment be located?
  - How will materials be collected? (i.e. - hauler, accessibility issues and frequency of pick-ups)
  - Who will be responsible for separating materials for recycling and placing them in the designated recycling containers?
  - How will cooperation with the recycling program be monitored? (i.e. - individual monitors or a committee)
  - What recycling statistics will be recorded? (i.e. - volume, weight, costs, savings). Who will be responsible for tracking this information?
  - What type of internal and/or external public relations program will be used to educate, motivate and inform relevant parties about the recycling program?
  - How will materials be marketed?
- Make a presentation to management on the recommended recycling system, emphasizing any cost benefits, including savings and revenue.
- Secure management approval for the implementation of the recycling program.



# The Waste Audit

- Determine types of material being thrown in the waste stream.
  - Over a 2-week to 4-week period, use only transparent garbage bags.
  - Enlist the assistance of custodial staff during this time to estimate the percentages of the various categories of material in the waste stream.
- or-
- Where unbagged articles are thrown directly into dumpsters, inspect the contents of the dumpster at regular intervals (i.e. - twice daily) to make a note of what is in the waste stream.
- If possible, actually weigh or estimate weights of different materials.
- Determine sources of various kinds of waste (i.e. - from one location or many locations).
- Determine which materials in the waste stream are recyclable.
- Analyze your organization's current solid waste management system based on the results of the Waste Audit. If certain items were recycled, could the size of the dumpster needed for solid waste disposal be reduced? Would fewer container pick-ups or pulls be required monthly?
- Document findings and recommendations, including the feasibility of recycling or not recycling certain types of materials, and the costs of setting up and operating the recycling program.

## For Commercial Waste Audits

**Hillsborough County Solid Waste  
Management Department**  
Phone: (813) 272-5680

**The Southern Waste Information Exchange (SWIX)**  
Phone: (800) 441 7949

# Cut Paper Waste

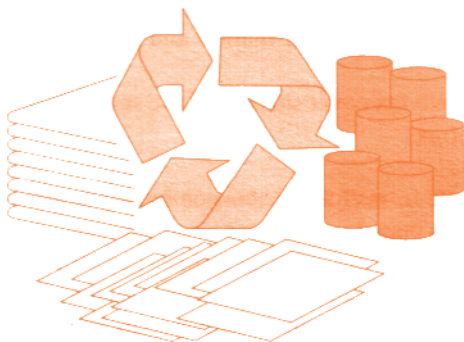


- Make double-sided photocopies and print on both sides wherever practical.
- Reuse file folders, interoffice envelopes and corrugated cardboard boxes.
- Where appropriate, use smaller typefaces, smaller margins, single spacing and vigorous editing to keep documents small.
- Make scratch pads from used paper.
- Circulate (instead of copying) memos, documents, periodicals, reports.
- Place announcements and notices on electronic and voice mail and on centrally located bulletin boards.
- Save documents electronically instead of making paper copies.
- Edit and proofread documents on the computer before printing.
- Make only the exact number of copies needed.
- Print summaries of reports and let people know where they can get the complete document, if needed.
- Send postcards or self-mailers and save envelopes.
- Eliminate fax cover sheets and use small, removable fax forms.
- Evaluate forms for possible combining and eliminate repetitive and obsolete data.
- Target specific audiences for direct mail as precisely as possible to reduce the amount of mail sent.
- Increase the use of electronic mail.



# Frequently Recycled Materials

- Paper/Paper Products
  - White ledger
  - Mixed office paper
  - Computer printout
  - Corrugated Cardboard
  - Newspaper
- Aluminum Cans
- Steel/Tin Cans
- Glass Containers
  - Flint (Uncolored)
  - Green
  - Brown
- Ferrous Metal
- Non-Ferrous Metal
- Plastics
  - PET #1
  - HDPE #2
- Yard Waste
- Wooden Pallets
- Batteries
  - Lead Acid
  - NICADS
  - SSLAs
- Drums
- Tires
- Used Motor Oil



# Buying Recycled



Develop and implement a procurement policy with an emphasis on buying equipment, materials and supplies with recycled content. Durable machinery and equipment with reusable/recyclable potential should be given preference.

## Pre-Consumer vs. Post-Consumer Content

Products with **post-consumer** content have a greater impact on reducing solid waste and conserving natural resources. The post-consumer materials would have been incinerated or landfilled if they had not been recovered and recycled. Post-consumer waste includes items which have already been used, such as office paper, newspaper, plastic and glass containers and aluminum and steel cans.

**Pre-consumer** waste or recovered industrial material, particularly in paper products, is not truly waste since it would have been reused anyway and not sent to the incinerator or landfill.

## Environmental Claims

Examine vague product claims such as “environmentally friendly,” “green,” “ozone safe” and “recycled content.” Specific information should be provided about the product and its packaging.

The term “recyclable” on a package or product is only meaningful if that particular material is recycled locally. It should be made clear whether an environmental claim refers to the packaging, the product inside, or both.

The words “biodegradable,” “photo degradable,” and “compostable” on products are significant only if there is a municipal solid waste composting facility where these products may be taken.



## Recycling Corrugated Cardboard

Corrugated cardboard, also called old corrugated cardboard (OCC), is one of the most frequently used packaging materials. It is made from unbleached, unwaxed paper with a rippled (corrugated) inner liner. This material accounts for more than 70 percent of the paper-based products recycled in the United States.

If your business receives a significant amount of materials or supplies in corrugated cardboard containers, you should look at the feasibility of recycling or reusing these boxes. **For many businesses, recycling OCC is usually cost-effective.**

If your business does not generate enough OCC for a hauler/buyer to collect at a cost level acceptable to you, you can save on pick-up charges by taking the OCC to the buyer yourself.

Corrugated cardboard cartons to be recycled should be **empty** and not contaminated with:

- Wax coatings
- Food waste or other trash
- Metal or plastic straps

Cartons should be:

- Source separated from other waste materials
- Flattened
- Baled (if there are large enough quantities of cardboard to justify this; baling also conserves space)

Owners and managers of smaller businesses located in an industrial park or strip shopping center and who share waste collection services may request a dumpster dedicated to OCC recycling. Any revenue generated from the sale of this material could be used to offset other waste disposal costs.



If your business does not generate enough corrugated cardboard to merit recycling, consider the following alternatives:

- Sell or give clean OCC to other businesses.
- Use OCC for storage and shipping.
- Make OCC available to employees or others who may be moving.

### **How To Make It Work**

- Assess whether it is convenient for your business to recycle. Factor in the location, space, containers, accessibility, personnel.
- Determine the volume of OCC your business is generating.
- Locate a hauler/buyer for the OCC.
- Find out what prices are being paid for OCC, loose and flattened or baled. Get the price paid per ton by the buyer over the past 12 months.
- Find out the minimum and maximum quantities acceptable for pick-up.
- Find out if hauler/buyer will provide collection containers at no charge.
- Find out maximum percentage of contamination that buyer will accept.
- Determine if it is cost-effective for your business to recycle OCC.

If your business does not generate enough OCC for a hauler/buyer to collect at a cost level acceptable to you, you can save on pick-up charges by taking the OCC to the buyer yourself.