# Waste Audit Introduction

Priscilla Hayes

Solid Waste Resource Renewal Group

# What is a Waste Audit?

- Discover what waste you generate
- What are you not recycling—you will find things you don't expect
- Review purchasing and management decisions
- How to reduce waste
- How to recycle more—what bins are needed, where, what systems to put into place, what training is needed

# Why a Waste Audit?

- Saving money on costly disposal
- Regulatory Requirements
- Reducing waste and thus disposal costs
- Positive environmental company image

# Designate a Leader

- Establish a team, size depending on the company size
- Familiar with company
- Incorporate opinions from whole company
- Short/long term goals
- Notify all employees
- Monitor waste over time

# Gather Facility-Specific Info


- Examine facility records
- Track inventory to determine what is used
- Determine hazardous materials
- Repair invoices
- Waste removal invoices
- Recycling contracts

# Facility Walk Through

- What waste produced
- Waste producing activities
- Spot inefficiencies
- Layout of operations
- Waste disposal space
- Current waste efforts
- Interview employees

# Evaluation and Monitoring

- Evaluate how to incorporate the results of the audit into waste/recycling changes
- Equipment requirements
- Space requirements
- Operation requirements
- Signage requirements
- Training requirements
- Motivating individual participation in changed system

# Identify Source Reduction Possibilities

- Paper
- Packaging
- Equipment
- Landscaping
- Purchasing
- Over-stocked items
- Food
- Consumer Choices

# Two Ways of Doing a Waste Audit Which Reveal Somewhat Different Things

- Audit only the things which are currently not being recycled—this involves going through trash bags and separating everything from there—this will show you a lot about things that are already recyclable that you are losing to trash
- Have temporary bins set up for each material you want to capture; this is cleaner but requires a lot of bin supervision or buy in from the entire facility—this is our recommendation for audits which are particularly focused on food waste or on materials you are not already recycling

ONLINE AT
http://www.swrrg.rutgers.edu/audits.html

WORKSHEET 5

# Waste Sort

***Use this worksheet to develop an accurate, detailed profile of the amounts and types of waste generated at your facility.***

This worksheet provides step-by-step instructions for sorting, weighing, and recording data on the waste generated by your company.

Two different types of waste samples may be analyzed for the purposes of this worksheet. Smaller companies should collect and sort all the waste generated during the day. Since this may be impractical in larger companies, these facilities can use a representative sample of approximately 50 pounds of waste from each collection container at their company.

Determine the size and location of the area in which you will sort the waste. For smaller companies, it may be easiest to sort the sample in a large indoor room after business hours. If large quantities of waste will be sorted, a large, flat area such as a parking garage or shipping and receiving area is preferable. It is advisable to sort in a covered area to provide cover from adverse weather. Health and safety issues should be considered as well. All members of the waste reduction team should wear protective clothing, for example, and precautions should be taken to ensure that the waste does not come in contact with food or drink.

You will need several containers for holding the sorted wastes and a scale for weighing the samples. The size of the containers depends on the amount of waste to be sorted. Office wastebaskets might work well for conducting small sorts. For larger companies, 30- to 50-gallon plastic containers, garbage cans, or large corrugated cardboard boxes will be needed. If there are no large scales at your facility, they often can be rented. In addition, you will also need shovels or pushbrooms, protective clothing (such as leather or thick rubber gloves, heavy-duty shoes, safety glasses, and coveralls), a clipboard, and a first aid kit.

A three- or four-person waste reduction team in a small business can probably complete the sorting and weighing in a few hours. Waste sorts at a larger business will take longer, depending on the size of the team and the amount of waste.

If you suspect that the waste sample being sorted is not truly representative of your company's waste generation practices, consult with your trash collection or operations manager for input on the accuracy of the data. Make a note on this worksheet of any results you feel may not be accurate.

WORKSHEET 5

# Waste Sort Form

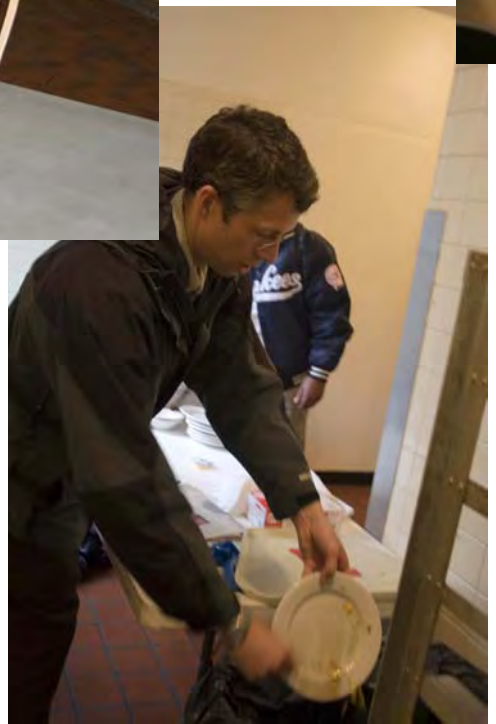
| | |
|---|---|
| **Date of Waste Sort:** | **Department (if applicable):** |
| **Source of Sample (if different from department):** | |
| **Sample Collected Over:** ☐ One Day ☐ Two Days ☐ Other (specify)_____ | |
| **Sample Collected:** ☐ All Waste at Source ☐ Representative Sample (specify weight)_____ | |
| **Members of the Waste Team:** _____ | |

| Waste Category | | Net Sample Weight | Percent of Total Sample Weight | Amount of Waste Generated Annually |
|---|---|---|---|---|
| Paper | High Grade | | | |
| | Low Grade | | | |
| | Newsprint | | | |
| | Corrugated Cardboard | | | |
| | Magazines/Glossy | | | |
| | Other | | | |
| | **Total Category Sample Weight** | | | |
| Plastics | PET (1) | | | |
| | HDPE (2) | | | |
| | PVC (3) | | | |
| | LDPE (4) | | | |
| | Polypropylene (5) | | | |
| | Polystyrene (6) | | | |
| | Other (7) | | | |
| | **Total Category Sample Weight** | | | |

# Waste Sort Inspection

- Physically sort waste and determine percentage makeup
- Types of waste
- Disposal problems
- Special equipment
- Waste removal
- Recycling info

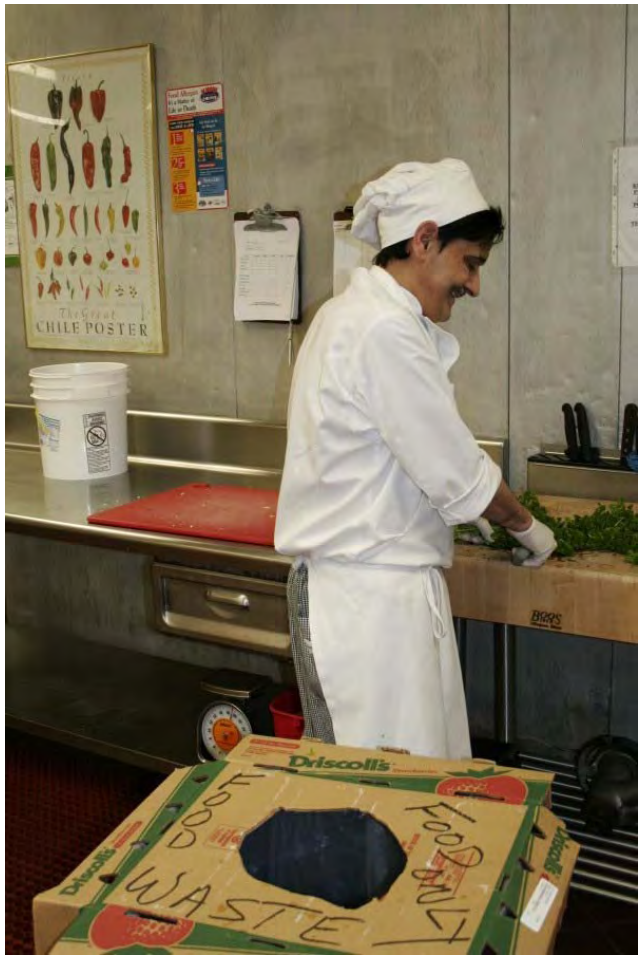
# Ultimate Temporary Bin Sort—Whole Earth Center, Princeton



# WASTE AUDITS

# Students Do A Waste Audit

# Individuals Getting Into Waste Audits




# What you as a Wastewise Business can do—Evaluate Your Collection and Hauling Systems

- Calculate how much waste, by tonnage and volume is being collected, and how
- If food waste and other waste organics were separated, what would be left? Can the collection or hauling system be changed? Reduce frequency, change size of containers?
- Build a system which will give you the utmost benefit from recycling food waste. This usually means contracting directly with the recycling market for food waste for tipping fee price, and then with the hauler for hauling costs only. Separate out the handling of the separate parts of your waste stream so that there is not a commingling of costs.



**AFTER THE WASTE AUDIT—SOME SYSTEM RECONFIGURATIONS: HYATT REGENCY PRINCETON**

# Opportunity to Choose Containers



# Reconfiguring Bins


# Innovative Follow Up

- See the WasteWise Resource Management Guide at http://www.epa.gov/osw/partnerships/wastewise/wrr/rm.htm.
- Consider using a Request for Information sent out to haulers/recycling markets to determine how they could be partners in your enhanced recylcing system.
- Require your hauler/markets to give you specific data on what is recycled on at least a quarterly basis. This will allow you to assess your progress, and have data for Wastewise forms.

# More Innovation: Whole Earth Center—Using A Waste Audit to Get LEED Credits

- Most complete waste audit we ever did, with the most categories for sorting
- Recommended by architect to get additional LEED credits for their green building renovation (EB)
- Discovered that they were already recycling (with a little tweaking) 68.63% of their waste stream
- Found two major categories, wooden crates, and waxy cardboard, which would give them an additional 18.64% being recycled
- Looking for the right markets for these

Priscilla E. Hayes, Esq., Program Coordinator
**Solid Waste Resource Renewal Group**
*Turning Waste Into New Products Through Innovation and Policy Change*
*Proud Winner of 2009 USEPA Environmental Quality Award*

c/o Department of Agricultural, Food and Resource Economics
Rutgers New Jersey Agricultural Experiment Station
Rutgers, the State University of New Jersey
55 Dudley Road
New Brunswick, NJ 08901-8520
732-932-9155, ext. 233
Fax: 732-932-8887
hayes@aesop.rutgers.edu

Please visit our websites:
http://swrrg.rutgers.edu
http://enviropurchasing.rutgers.edu