

Assessment Tools and Case Studies – 1: Solid Waste Audit

*Green Offices, Green Purchasing:
A Workshop on Sustainable Practices*

June 29, 2010

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Solid Waste Audit

A solid waste audit is a formal, structured process used to quantify the amount and types of waste being generated by an organization.

Source: The Solid Waste District of LaPorte County. *How to Conduct A Waste Audit*. [Online]
Available at: http://www.solidwastedistrict.com/projects/waste_audit.htm [Accessed July 2009].

Solid Waste Audit

Objectives:

1. Determine composition and quantities of solid waste being generated
2. Measure effectiveness of existing waste management systems
3. Identify opportunities for improving waste management systems and strategies
4. Collect baseline data for measuring the effectiveness of waste minimization strategies
5. Identify opportunities for green purchasing

Source: http://www.solidwastedistrict.com/projects/waste_audit.htm

Why is this important?

The Business Case - Waste management/disposal is an expense:

- Tipping fee
- Transportation cost
- Labor
- Purchases (bins, totes, bags)
- Cost of excess/unused/expired purchases

Why is this important?

The Environmental Case:

- Landfill (space, management)
- Energy use (incineration, transportation)
- Emissions
- Recycling opportunities
- Cradle to Grave (Linear system)

Solid Waste Audit

Steps:

1. **Plan** the audit (get management support, define study area, inform personnel of audit process)
2. **Collect** the waste
3. **Sort** the waste (sort into different categories, count and weigh, record the data, dispose)
4. **Analyze** the data (calculations, results and recommendations)
5. **Implement** Recommendations

Source: http://www.solidwastedistrict.com/projects/waste_audit.htm

What you will need



Just
kidding!!!

Source: <http://www.ssplprints.com/lowres/43/main/22/101151.jpg>

What you will need

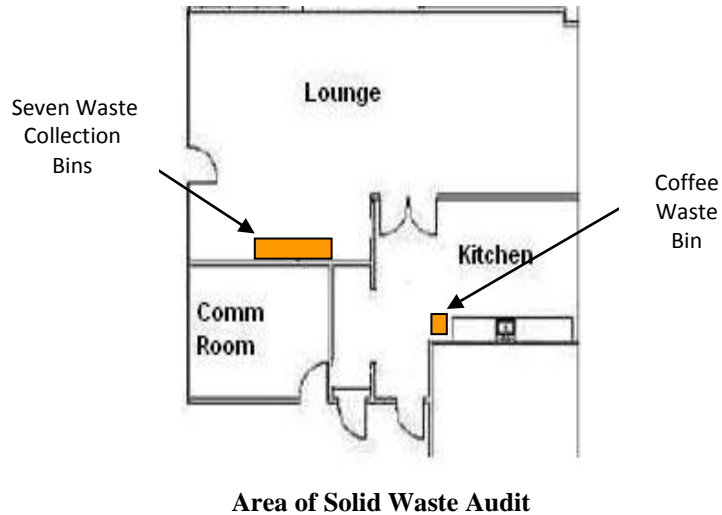
1. Secure well ventilated work and sheltered area to perform the audit
2. Two or more large tables for sorting (or equivalent floor space)
3. Plastic sheeting to cover tables (or floor)
4. Safety equipment (gloves, safety glasses) and first aid kit
5. Tongs and rakes to sort through garbage (if necessary)
6. Accurate scales (bathroom scales will do for general office audits)
7. Data sheets
8. Garbage bags
9. Brooms and disinfectant
10. Paper towels, soap

Source: <http://www.solid.gov.bb/resources/Brochures/Greening/greening02.asp>

Case Study

- Solid Waste Audit at financial institution in Rochester, NY
- Total number of employees at facility: 150-200
- Audit area: Cafeteria/Kitchen area
- Audit period: ~5 days
- Time taken to perform audit: ~2 hours

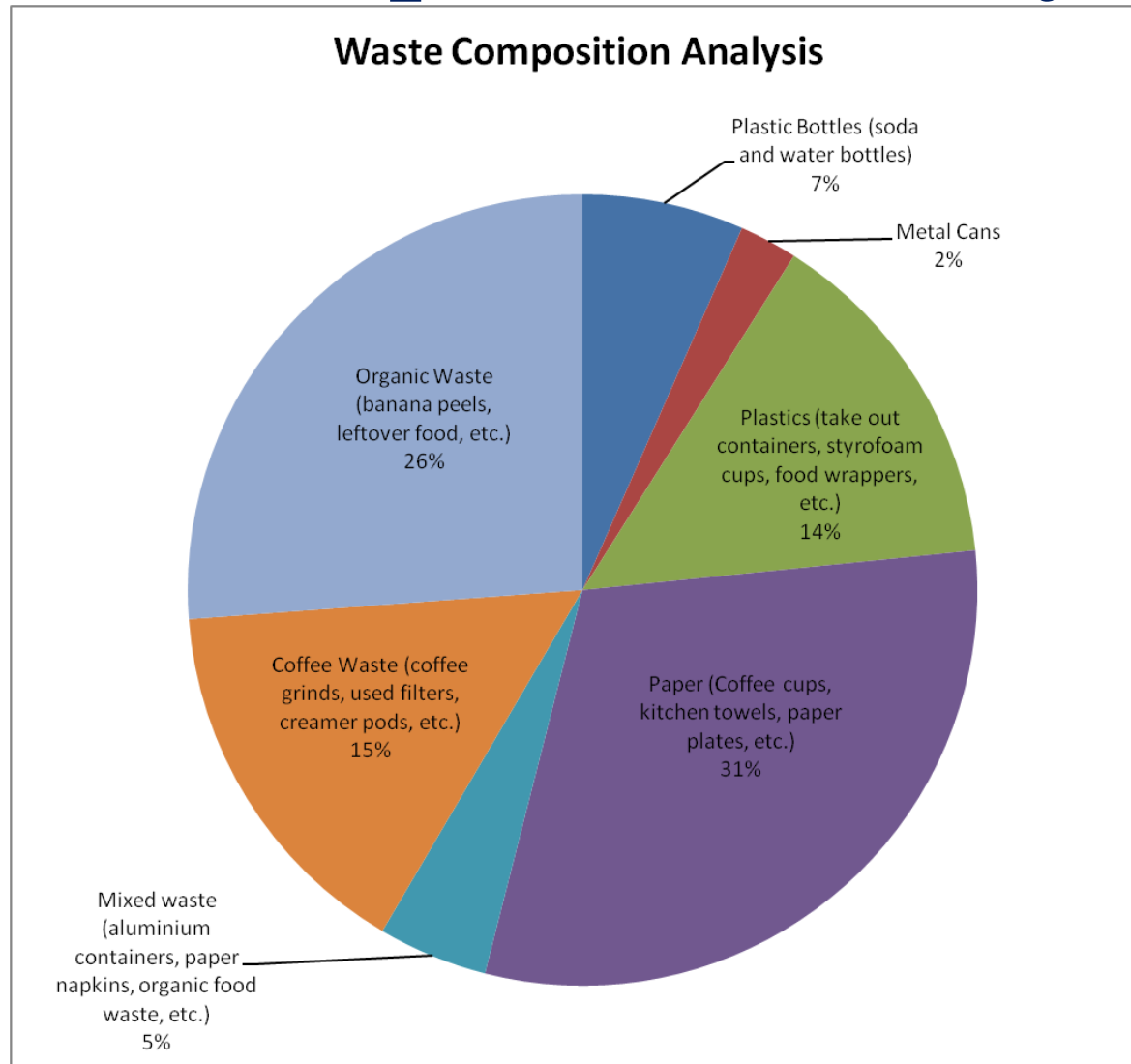
Audit Area



Waste Categories

1. Organic Food Waste Only (Banana peel, leftover food, etc. – No Packaging)
2. Other Food Related Wastes (Paper cups, paper bags, napkins, foam, straws, stirrers, juice/milk cartons, etc.)
3. Everything else (AA batteries, etc.)
4. Glass (All types – Clear, Colored)
5. Cans & Plastic Bottles (All metals, all plastic types)
6. All Other Plastics (Plastic binders/folders, packaging, etc.)
7. Paper Waste (Printing paper, office paper, colored paper, cardboard, newspapers, magazines, etc.)

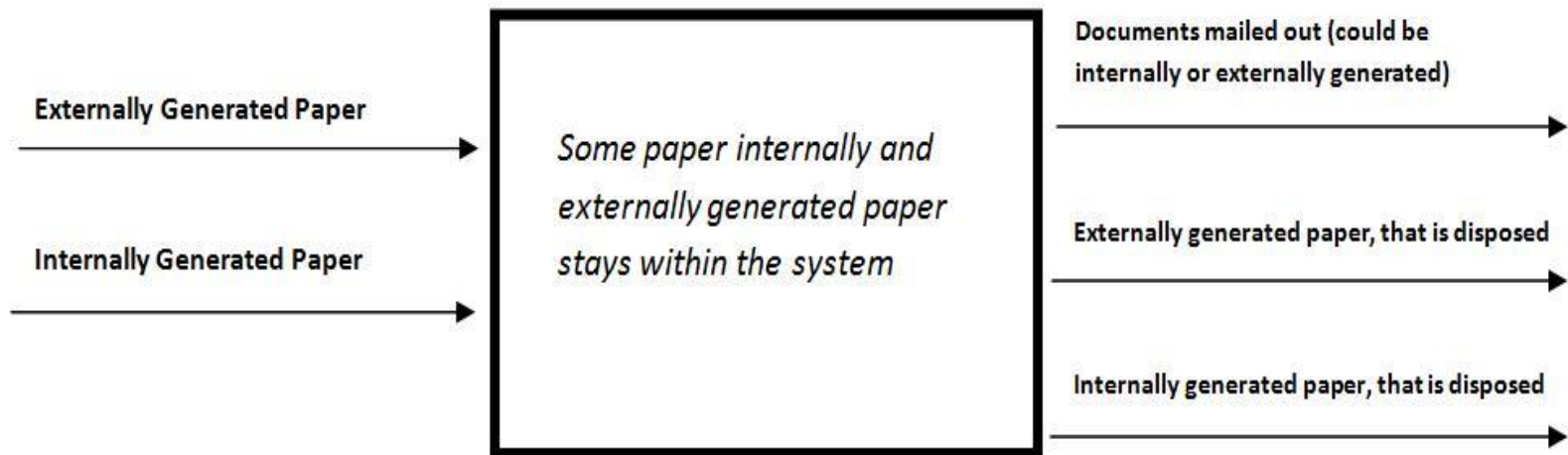
Waste Composition Analysis



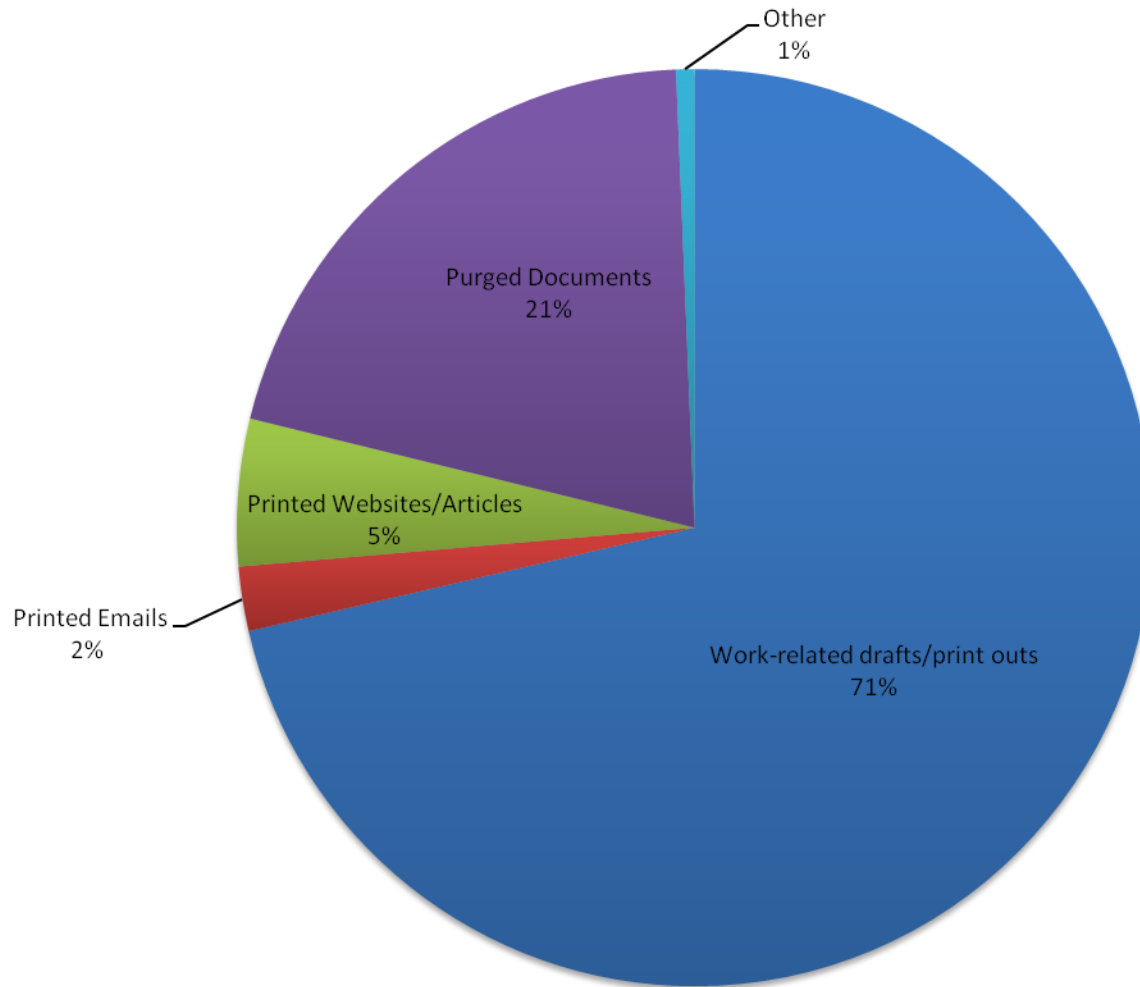
Paper Use Audit

- 10 participants
- Paper Usage studied for 5 days
- Employees surveyed for paper usage practices

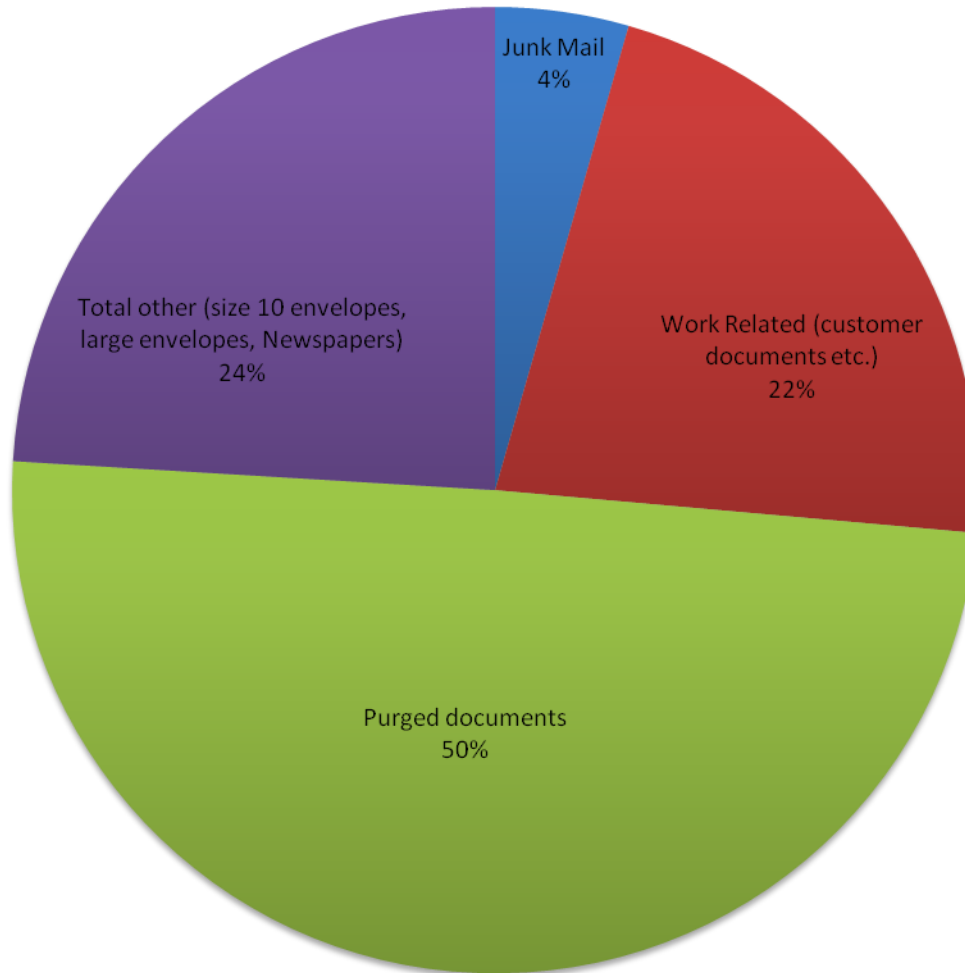
Paper Use Audit



Internally Generated Waste paper



Externally generated Waste paper



Highlights of survey results

- 37.5% of participating staff members said that they never print double sided.
- 62.5% said that they occasionally or moderately ensure that the document is ready to be printed to avoid printing multiple rough drafts.
- 6 out of 8 members stated that they don't reuse paper from recycling bin, if possible.
- According, to 5 participating staff members up to 50% of purged documents are externally generated paper.

Questions

Environmental Impact Across the Value Chain

