

Paper and Paperboard Recycling Guide



Handbook AS-550-A
September 1997

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1 Introduction

The United States Postal Service is committed to a national pollution prevention program that will improve environmental quality and set a positive example in every community we serve. The focus of this guide is on recycling undeliverable standard mail (USM, also referred to as undeliverable bulk business mail (UBBM)), paperboard (which we refer to as old corrugated cardboard (OCC) or merely as cardboard), and mail that is discarded in the lobbies of post offices (referred to as discarded lobby mail or DLM). This guide offers Postal Service managers strategies for identifying and carrying out ways to recycle paper and cardboard to conserve our natural resources. It provides guidance for the design of a performance cluster recycling program to meet the needs of every Postal Service performance cluster and facility in the United States. Complementing this guide is Handbook AS-550-B, *Paper and Paperboard Recycling Plan*.

Recent developments have made recycling a cost-effective alternative to the use of landfills. This guide, then, focuses on opportunities to recycle paper and cardboard material since they make up the largest part of the Postal Service waste stream. (Other solid waste materials are plastic, wood, tires, and metals.) The guide also reviews Postal Service policy on compliance with federal, state, and local recycling laws and regulations.

1-1 What Is Postal Service Policy?

Postal Service policy requires the recycling of all recoverable materials to foster the sustainable use of natural resources. Consistent with that policy, the decision to recycle must be based on state and local recycling mandates and should also be based on sound business factors that include cost avoidance, revenue-producing opportunities, availability of markets, transportation, and logistical constraints.

When state and local government regulations require businesses to recycle or when they ban disposal of recoverable materials in landfills, the Postal Service must comply with them.

In addition to our commitment to recycling paper and paperboard, Postal Service policy requires us to recycle all recoverable materials, including (but not limited to) the following:

- Wood.
- Metal.
- Plastic.

Policy

It is Postal Service policy to recycle all recoverable materials to foster the sustainable use of natural resources.

- Glass.
- Gas filters.
- Oil filters.
- Oil.
- Antifreeze.
- Industrial rags.
- Fluorescent tubes.
- Electronic parts and equipment.
- Rubber.
- Other items that can be recovered.

1-2 What Is Recycling?

Recycling is the process of returning used material to a manufacturer for reprocessing and reuse. In an integrated materials management system, it is one of six primary actions for managing waste products — the others are source reduction, reuse, recovery, treatment, and disposal. (In this guide, we deal exclusively with recycling non-hazardous material.)

The first and most desirable action for waste management is source reduction, which focuses on decreasing the amount of waste and its toxicity. Recycling, one of the most effective actions in the process, moves valuable material back to the manufacturers rather than sending it to landfills and incinerators. Treatment and disposal of solid waste material that is not recycled requires incinerating it or disposing of it in landfills.

Definition

Solid waste is discarded material not separated for recycling or reuse.

While the principle of recycling is a concept that can be applied to all solid waste, this guide focuses on the Postal Service's largest waste stream — recycling opportunities for recovered paper and cardboard material.

1-3 Why Is Recycling Important?

Recycling helps conserve the natural resources from which our products originate. It signifies the Postal Service's commitment to protecting the environment. As acceptable landfills become limited, the costs for landfill disposal and transportation to these disposal locations will continue to rise. Recycling can significantly reduce the amount of recoverable material that must be sent to a landfill. It can also reduce Postal Service operating costs.

We developed our recycling policy to satisfy many needs. First, it is a customer service policy — one that better serves our customers'

requirements that we be environmentally responsible. It is also a business policy — one that has become a part of our corporate strategy because it saves money, and we are legally responsible for managing our waste streams responsibly. Finally, it is an employee policy — one that acknowledges their importance in making the Postal Service a part of the community effort to conserve resources.

1-4 How Much Paper Waste Is There?

Since the late 1980s, the popularity of recycling has skyrocketed. With the closing of many landfills and the increased cost for disposal, Americans have come to recognize the need for resource conservation. The rapid growth of recycling was spurred in part by passage of the Resource Conservation and Recovery Act in 1976.

In the United States today, Americans generate more than 209 million tons of municipal solid waste each year, and that amount continues to grow. That growth has had an alarming effect on landfills; since 1990 more than 80 percent of the nation's landfills have been closed either because they could not meet modern landfill requirements or because they had exceeded their capacity. Paper and paperboard account for nearly 81 million tons of the 209 million tons of solid waste generated throughout the country annually. Even though paper consumption is continuing to increase, recycling has significantly reduced the amount of paper disposed of in landfills.

1-5 How Do Recycling Trends Affect Us?

About 85 percent of the 1.4 million tons of solid waste generated yearly by the Postal Service consists of recyclable paper products generated from USM, DLM, and cardboard. Thus, by recycling paper and cardboard, we would be recycling 85 percent of that discarded material. But paper and cardboard are not the only material we should recycle. Recycling other material is also important for environmental protection and conservation; however, a good recycling program will give the highest priority to the highest payoff, and in most Postal Service facilities, that will be USM, DLM, and cardboard.

1-6 Why Is the Postal Service Involved in a Recycling Program?

The primary purpose of the Postal Service's commitment to environmental protection is to provide its employees and customers with a safe and healthy environment. On a more practical note, recycling is a sound business practice. The costs associated with the on-site generation and storage of paper and its off-site transportation and disposal have been increasing steadily and must be dealt with

Policy

Our recycling policy was designed to serve our customers better, save money, and help our employees get involved in community conservation efforts. By recycling paper and cardboard, we would be recycling 85 percent of that discarded material.

through such actions as recycling. In addition, the Postal Service must comply with state and local recycling laws when such laws require businesses to recycle or ban the disposal of recoverable materials in landfills.

Definitions

Recycling is a sound business practice that can produce revenue for the Postal Service.

EVA is a measure of financial performance focused on long-term growth and profitability.

As a business decision, recycling contributes to economic value added (EVA) — a measure of financial performance focused on long-term growth and profitability. Economic value added improves when we increase revenue, decrease costs, or invest in capital to maximize our ability to generate revenue and reduce costs. By considering the revenue produced by the recycled material, the cost avoided by not having to pay for other means of disposal, and the benefit of increasing our value over time, EVA gives a measure of the long-term effects of recycling. An example is presented in Exhibit 1-6.

Exhibit 1-6, Benefits of Recycling

Consider two of the business aspects of recycling recoverable paper — revenue produced and cost avoided. A case study¹ of a Columbia Area Post Office in Columbia, Maryland, found the following:

Before the recycling program:

- A 40-cubic-yard trash compactor was emptied 3 times a week.

After the recycling program:

- The 40-cubic-yard trash compactor was emptied every 3 weeks.
- At an average market price of \$6.10 a ton, the post office earned \$160 a month from the sale of USM and cardboard.
- The post office saved \$450 a month by not having to purchase landfill space.

The post office in Columbia saved a total of \$610 a month, counting the savings on trash collecting. With 35,000 Postal Service facilities throughout the country, the savings could be more than \$50 million annually.

¹Burt Hill Kosar Rittelmann Associates. *Greening of Medium Standard Building Designs*. July 2, 1996.

That kind of profitability can be sustained over time and even improved with the third business aspect of recycling: capital investment. Initially, a recycling program may start out slowly and be based on short-term goals and short-term recycling strategies. In the long run, a profitable program should include a centralized transportation system and may require capital investment to fully implement it. A long-term strategy that incorporates a centralized program has many benefits. These aspects are discussed in 1-7.

Definition

Centralizing means using the existing transportation network to consolidate recycling.

1-7 How Can the Postal Service Maximize Cost Savings and Revenue?

Participating in a centralized recycling program will provide the opportunity for performance clusters to maximize cost savings and revenue generation. By centralizing, we mean using the Postal Service's existing transportation framework to consolidate paper recyclables. Centralizing gives us the opportunity to minimize the hauling, storing, equipment, and labor costs of disposing of the material. Centralizing will also generate larger volumes of paper, which can improve the quality of our recyclables and increase their overall market value.

Paper prices can change rapidly and often, and when market prices drop, the change can greatly affect the profitability of the recycling program. Centralizing can stabilize earning potential from recycling, since having larger quantities of paper to sell increases the Postal Service's bargaining power and allows us to enter into longer-term contracts with recyclers. Even when the price of paper drops to a level where it may no longer be profitable to recycle, centralizing provides a network that will still allow us to minimize the costs for transporting the recyclable materials elsewhere. Exhibit 1-7 presents the many cost-saving and revenue-producing opportunities available through Postal Service paper recycling using three basic approaches: backhauling, a milk-run program, or a single-site program.

Each cost and revenue opportunity listed in Exhibit 1-7 has a priority assigned to it. The highest priority (H) offers the greatest benefit to the recycling program over time. As indicated in the exhibit, centralizing will provide the greatest opportunities for establishing long-term cost savings and generating revenue. Each of these methods is discussed in greater detail in Chapter 4, Program Development and Implementation.

Exhibit 1-7, Basic Cost-Saving and Revenue-Producing Opportunities for Postal Service Paper and Cardboard Recycling Programs			
Cost and Revenue Opportunities	Programs		
	Single Site*	Milk Run**	Backhauling*** (Centralized)
Basic Cost-Saving Opportunities			
Landfill disposal fees	L	M	H
Waste hauler fees	L	M	H
Equipment rental fees	L	H	H
Container rental fees	L	H	H
Postal Service labor costs for waste removal	L	L	L
Reporting and tracking labor costs	L	L	L
Cost Savings Through Economies of Scale			
Centralized recycling using backhauling	N	N	H
Reduction of Dumpster™ size	L	M	H
Reduction of frequency of Dumpster pickups	H	M	H
Require removal of Dumpsters only when full	H	H	H
Use existing Postal Service infrastructure to recycle	L	L	H
Consolidated solid waste contracts	H	H	H
Basic Revenue-Producing Opportunities			
Sale of paper tied to a market index	L	M	H
Separate plant cardboard from mixed paper	N	N	H
Contaminant-free mixed paper	H	H	H
Consolidate paper to increase market value	N	M	H
Seek mill contracts to eliminate middlemen	N	H	H
Cost Stabilization Option			
Target cardboard makers	N	H	H
Establish long-term recycling contracts	L	M	H
Establish long-term solid waste contracts	H	H	H
Limit milk-run concept	N	N	H
Program controls and accountability	L	M	H
KEY		TOTALS	
H High-Priority Opportunities	5	8	20
M Medium-Priority Opportunities	0	8	0
L Low-Priority Opportunities	11	3	2
N No-Priority Opportunities	6	3	0
<p>H = Areas where revenue generation or cost savings are greatest and must be pursued.</p> <p>M = Areas where revenue generation or cost savings are favorable and should be pursued when feasible.</p> <p>L = Areas where revenue generation or cost savings may be feasible under certain conditions.</p> <p>* Single site = Recycling programs designed for one facility.</p> <p>** Milk run = An additional scheduled transportation movement between units used to pick up recyclables.</p> <p>*** Backhauling = A regular return trip in which a normally empty vehicle returns to a central facility with materials for recycling.</p>			

1-8 What Laws Affect the Postal Service?

1-8.1 Federal Environmental Laws

The United States has made progress in encouraging recycling through local, state, and federal environmental programs. While recycling is encouraged, it is not yet required by the federal government. Recycling is consistent with the National Environmental Policy Act, which was enacted to enhance the quality of renewable resources and encourage the maximum attainable recycling of depletable resources. The following federal laws deal with recycling and pollution prevention issues:

- The National Environmental Policy Act of 1970.
- The Resource Conservation and Recovery Act of 1976.
- The Pollution Prevention Act of 1990.
- Executive Order 12856 — Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements.
- Executive Order 12873 — Federal Acquisition, Recycling, and Waste Prevention.

Executive Order 12873 directs the federal government to use natural resources efficiently by maximizing recycling and preventing waste wherever possible.

1-8.2 State and Local Regulations

The Resource Conservation and Recovery Act authorizes states to establish plans and programs to manage solid waste. Some state recycling regulations require mandatory source separation or impose bans on the disposal of certain materials. If state and local governments mandate businesses to recycle mixed paper or other materials or ban their disposal in landfills, those mandates also apply to the Postal Service. Examples of state and local regulations that apply to the Postal Service are described below.

Mandatory source separation. This regulation requires businesses to separate recyclable materials from other discarded material. It has proven effective in creating public participation in recycling programs. Mandatory source separation can be enforced by states and localities in several ways, including citations, fines, or refusal to collect unseparated material.

Disposal bans. These bans apply to such recyclable materials as newspapers, glass bottles, lead acid batteries, used motor oil, and tires. Many states have banned those materials from landfills or local incinerators.

Policy

State and local recycling ordinances contain specific measures regarding the management of solid waste in their jurisdictions.

Definitions

Mandatory source separation requires businesses to separate recyclable material from other discarded material.

Disposal bans prohibit the disposal of recoverable material in landfills.

Definitions

Variable disposal fees at landfills or combustion facilities are an economic incentive to recycle.

Anti-scavenging ordinances prohibit the removal of recyclable material by anyone other than an authorized recycler or solid waste contractor.

Variable disposal rates. Some local governments have adjusted disposal fees at landfills or combustion facilities as an economic incentive to recycle. As long as these variable disposal fees are uniformly applied to all government agencies, the Postal Service must pay them.

Flow-control ordinances. Some states and localities have enacted ordinances to control the destination of solid waste. Those ordinances were designed to encourage recycling and ensure a steady flow of materials to solid-waste combustion facilities. In 1994, the U.S. Supreme Court struck down flow control as a violation of the interstate commerce clause. Thus, Postal Service facilities are not required to direct recyclable materials to state or locally operated recycling centers or waste-to-energy facilities. Postal facilities may direct a certain regular volume of paper material to waste-to-energy facilities as a last resort to keep waste from being disposed of in a landfill.

Anti-scavenging ordinances. Anti-scavenging ordinances prohibit the removal of recyclable materials by anyone other than an authorized recycler or solid waste contractor. Most communities have instituted anti-scavenging ordinances at local landfills.

2 Goals and Strategies

2-1 What Are the Postal Service's Nationwide Recycling Goals?

The Postal Service's environmental policy calls for setting up recycling programs at every level of our organization — Headquarters, areas, and performance clusters. For the program to be successful, everyone in the Postal Service must participate in it.

One way we can reduce solid waste is to eliminate it at the source through better product design, reduced consumption (e.g., using two-sided copying), or reduced packaging. While we cannot eliminate much of the paper and cardboard material, we can effectively reuse or recycle it to minimize excessive use of natural resources. At a national level, we have targeted the following three materials for 100 percent recycling:

- Undeliverable standard mail.
- Discarded lobby mail.
- Old corrugated cardboard.

The Postal Service will recycle all three of these materials to reduce disposal costs, and where markets are favorable, we will realize revenue from their sale. Postal Service managers should expand the reuse and recycling of the targeted materials since market opportunities exist to recycle all of them into useful products.

2-2 What Are the Postal Service's Policy Planning Objectives?

In 1994, the Postal Service National Task Force addressing the recycling of USM (otherwise known as UBBM) identified the following five policy objectives for the Postal Service recycling program:

- Recycling is a business issue. It has two economic benefits: it avoids the cost of placing the material in landfills and it generates revenue when those recyclables are sold in the marketplace.
- Area and performance cluster recycling strategies are a high priority. The development of area and performance cluster recycling strategies is highly recommended to ensure a smooth transition to a uniform national program. Handbook AS-550-B describes a seven-step process for

Policy

Targeted for 100 percent recycling nationwide:

- **Undeliverable standard mail.**
- **Discarded lobby mail.**
- **Cardboard.**

Objectives

Recycling is a business issue.

Recycling strategies are a high priority.

Recycling strategies must be consistent with laws and regulations.

The Postal Service must promote a market for recyclables.

Recycling is an employee issue.

developing a performance cluster recycling plan to meet your performance cluster plan requirements.

- Recycling strategies must be consistent with laws and regulations. Performance cluster recycling plans must provide for meeting all state and local requirements for recycling and solid waste management.
- The Postal Service must promote a market for recyclables. If we are to meet Postal Service recycling goals, we must actively purchase goods that have recycled content and that can in turn be recycled.
- Recycling is an employee issue. Postal Service employee participation and commitment are essential to a successful recycling program.

2-3 How Do We Develop a Recycling Strategy?

As the starting point in developing a recycling program, each performance cluster should prepare a seven-step recycling plan that enables its facilities to meet program goals and that describes those goals to postal employees:

- Step 1: Build a recycling team.
- Step 2: Identify the recyclables.
- Step 3: Identify market conditions.
- Step 4: Develop program goals.
- Step 5: Establish an implementation strategy.
- Step 6: Identify educational requirements.
- Step 7: Establish a tracking and evaluation system to measure progress.

Setting up a recycling team is the first — and perhaps the most important — step in developing a first-rate recycling program. After you set up the team, take the other six steps and your program should fall into place. Now, let's look at each of those seven steps in detail, starting with building a recycling team.

2-4 Step 1: Build a Recycling Team

2-4.1 Team Members

Recycling Coordinator. The recycling coordinator is the key member of the team. At the performance cluster, the role of the recycling coordinator is normally performed by the district environmental compliance coordinator (DECC). He or she makes sure the program

functions smoothly and is effective in promoting recycling. The coordinator must be able to work with many different people — the recycling team, higher management, recycling vendors, and waste haulers, to name a few. A team at the performance cluster level should consist of managers or representatives from each functional area — plant maintenance, operations, and transportation.

At larger post offices and mail processing facilities, a team recycling approach is recommended. A team should consist of employees, including the postmaster or plant manager.

The recycling coordinator has a variety of duties and deals with a diverse group of people. Those duties include the following:

- Identifying the recoverable materials at the facility.
- Determining which materials should be recycled.
- Tracking progress in recycling.
- Keeping records of all recycling.
- Encouraging employee participation.

Of all those duties, perhaps the most important is to encourage the employees to participate, for it is their efforts that make this program a success.

Recycling Assistant. The recycling assistant should have the same abilities as the recycling coordinator and be available to serve in place of the recycling coordinator whenever needed. Depending on the size of the facility and the extent of the recyclable material, one or more assistants can be assigned to work with the coordinator.

2-4.2 Team Duties

In Postal Service performance clusters and facilities, the recycling team has three major duties:

- To establish the overall program goals.
- To develop the recycling plan — the plan for collecting, storing, marketing, and maintaining the recycling program.
- To monitor the program's progress and evaluate its success.

Note

A performance cluster team should comprise representatives from each functional area: plant maintenance, operations, and transportation.

Notes

Team duties:

- **Establish overall program goals.**
- **Develop performance cluster recycling plan.**
- **Monitor the program's progress.**

Recycling teams should design a recycling program by using current equipment and personnel. A performance cluster recycling team should use available transportation systems to consolidate at mail processing centers all recoverable paper generated at operational facilities.

The performance cluster recycling team is necessary to oversee the entire recycling program. The team should encourage all employees to participate in training, tracking, monitoring, and reporting.

2-5 Step 2: Identify the Recyclables

The next step in the planning process is to identify the types of recyclable material generated at the performance clusters. Before you can plan recycling strategies and set goals, you need to determine the type and amount of recyclable materials generated and the waste management practices currently used. You only need to do that once at a typical post office, mail processing facility, or vehicle maintenance facility (VMF) to establish a waste profile for standard Postal Service operations.

Objective

Aim for waste streams that provide the greatest return.

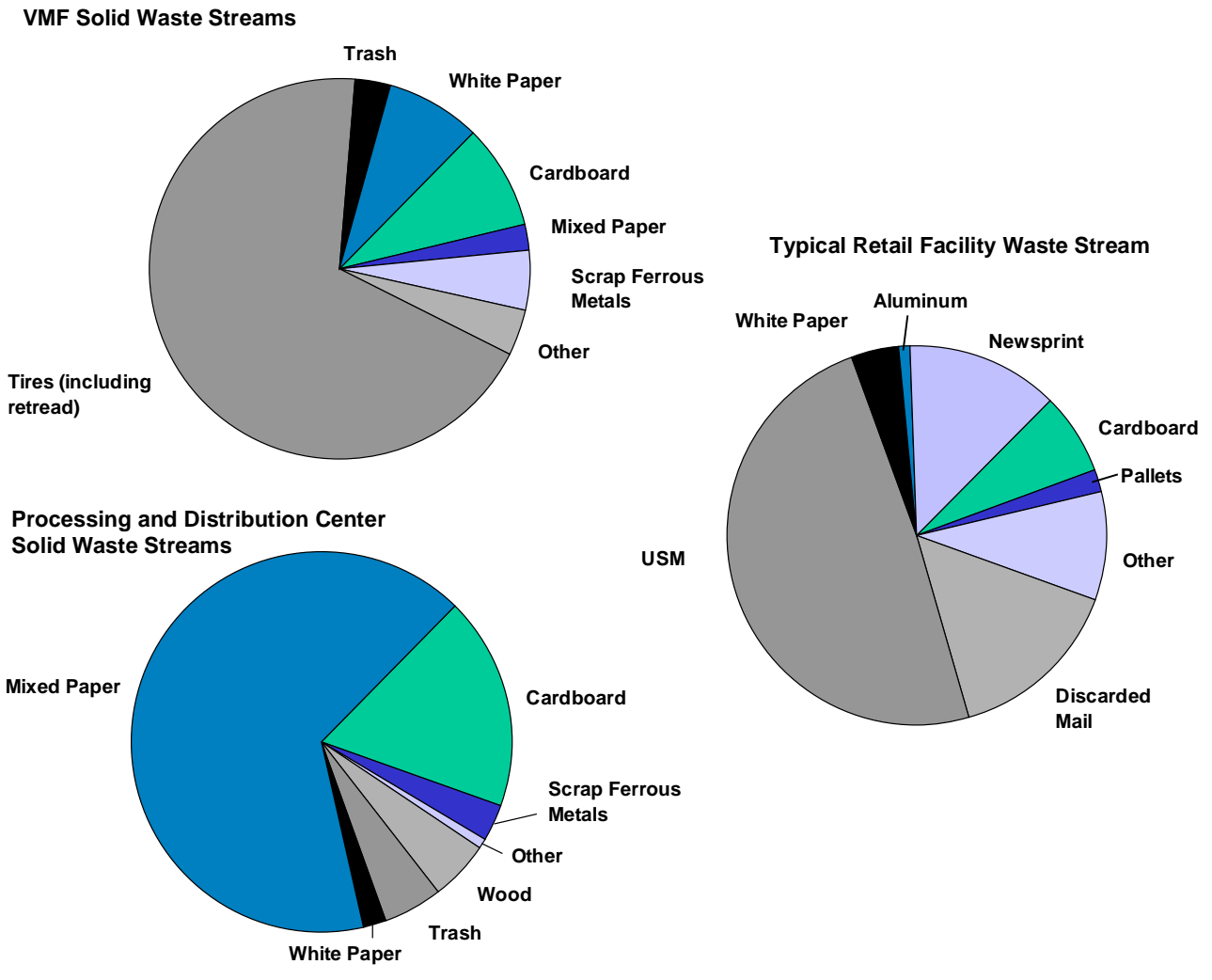
Many performance clusters have already profiled their operations. In addition, a nationwide Postal Service survey was conducted to estimate the amount of recyclable materials generated at three facility types: vehicle maintenance facilities, retail facilities, and processing and distribution centers (see Exhibit 2-5).

Those assessments show that the Postal Service should target recoverable paper (which includes USM, DLM, and newsprint) and cardboard as recycling opportunities. The vast majority of the recyclable material generated at retail facilities and processing and distribution centers consists of those materials. And, of the recyclables generated at Postal Service facilities, those materials provide the greatest potential for reducing costs and generating profit.

To determine the total flow of material disposed of by the facility and how much can be recycled, the facility manager and the recycling coordinator need to walk through the facility and create a profile of its waste-generating processes and operations. Here are some suggestions for that walkthrough:

- List all the functions of the facility.
- Develop a checklist to record the types and amounts of recyclable materials.
- Conduct the walkthrough during normal business hours.
- Trace the materials' life cycles from the time they enter your facility to the time they become recyclable products.

Exhibit 2-5, Recyclable Materials



- Identify special handling needs.
- Record all observations and discussions to document the findings and to use when making comparisons with future assessments.

In the final phase of implementing the recycling program, reassess the amount of nonrecyclable materials generated at the facility. In most cases, the waste reduction will be substantial enough to warrant the use of smaller collection bins and fewer pickups. Renegotiating trash pickup contracts and using smaller containers offer the opportunity for substantial cost savings. Procedures for doing so are discussed further in Chapter 3, Purchase and Sale of Recyclable Material.

2-6 Step 3: Identify Market Conditions

2-6.1 Identifying Costs and Benefits: Making the Decision to Recycle

Recycling is a business decision. Before developing a recycling program, the recycling coordinator should determine whether a market for recyclables is available. If so, determine whether recycling offers more benefits than costs in comparison with disposing of the material in a landfill or burning it. When prices drop, however, the revenues derived from mixed paper or cardboard may be sufficient only to cover the cost of collecting and transporting it. In all areas of the country, you must address the following critical questions to determine how to plan an effective paper recycling program:

- Is recycling a government requirement that businesses must comply with?
- Is recycling cheaper than disposal in landfills?
- Is backhauling (centralizing at the collection center) cheaper than using a milk run?
- Can recycling be implemented with minimal or no additional labor?
- Can recycling generate revenue opportunities?
- Are paper mills or brokers that utilize mixed paper available?

Notes

Determine whether recycling is a requirement in your state and whether the state has limited the disposal of paper and/or cardboard in landfills.

The Postal Service can sell larger quantities of mixed paper at central collection points to support the needs of paper mills.

When making the decision to recycle, you must first determine whether recycling is a requirement in your state or whether the state has imposed limitations on disposing of paper and/or cardboard in landfills. Even in states where recycling is not a requirement, it provides cost savings by eliminating landfill and disposal fees.

You should also determine whether centralizing your program will provide greater cost savings than implementing an individual program. As a rule, centralizing allows for greater cost savings because the recycling program will be the same throughout the performance cluster, and a tracking and monitoring program can be more effective. While many Postal Service recycling initiatives work well with local recycling programs, these local approaches should nevertheless be replaced in favor of performance cluster approaches that collect mixed paper at a central location using Postal Service vehicles. Such approaches eliminate collection and transport costs that would otherwise be imposed upon a single facility and require minimal additional labor.

As we mentioned, the price of paper will have the strongest effect on the amount of revenue that you may gain by recycling. Individually, a

Postal Service facility is also more likely to pay to recycle, especially in a market in which prices are low, because it does not have enough recyclable material to make it worthwhile for a recycler to pick it up without charging. Collectively, however, several facilities can accumulate enough material in one central location to allow the Postal Service to get a greater return for recyclables. The Postal Service can sell the larger quantities of mixed paper at various central collection points to support the raw material needs of many paper mills while generating revenue for the Postal Service.

As long as local markets for paper exist, recycling will be a cost-effective alternative to disposal. Markets for recyclables include mills that produce various paper and cardboard products, including products such as tissue, kraft paper, and paperboard and cardboard containers.

2-6.2 Finding a Buyer for Your Recyclables

The next step in planning your recycling program is to learn about the marketability of your materials. Develop a marketing profile to assess the potential for selling your materials and the needs of your recycling program. Knowledge of the following is important for finding a market for your materials:

- The types and quantities of materials that will be accepted.
- Their market price.
- The contamination levels that are acceptable.
- The types of collection processes available.

If you decide to market your materials locally, you must identify buyers of recyclables and contact your purchasing and materials service center (PMSC) for assistance in developing sales contracts. Here are some information sources the recycling coordinator might wish to review in the search for buyers:

- *Lockwood Post Directory* — a directory of all paper and pulp mills in the United States.
- *Fibre Market News* — a directory of paper dealers and users.
- *Paper Matcher* — a directory of all recyclers, by state and products they use.
- *The Official Board Market* — a summary of recyclable commodity prices (commonly referred to as the Yellow Sheet).
- Market summaries (now produced by most states) — summaries provide information on recycling markets and are available from the states' environmental agencies.

Note

Develop a market profile to assess the potential for selling your recyclables.

- Market development guidance — guidance provided by the General Services Administration (GSA) offices. (GSA offices are also a good resource for the alternative markets that might use postal recyclable products.)

2-7 Step 4: Develop Program Goals

Part of the planning process involves goals and objectives. For example, many areas and performance clusters have set a goal of 100 percent participation in the USM, DLM, and OCC recycling program, a goal that was once thought to be unattainable. However, on the basis of the success of programs implemented in various areas, that goal has been routinely met in many performance clusters.

Definitions

The Rosetta Stone approach is the key to correlating the language of the mill with that of the paper broker and the Postal Service planning team. Use this approach in designing your recycling plan.

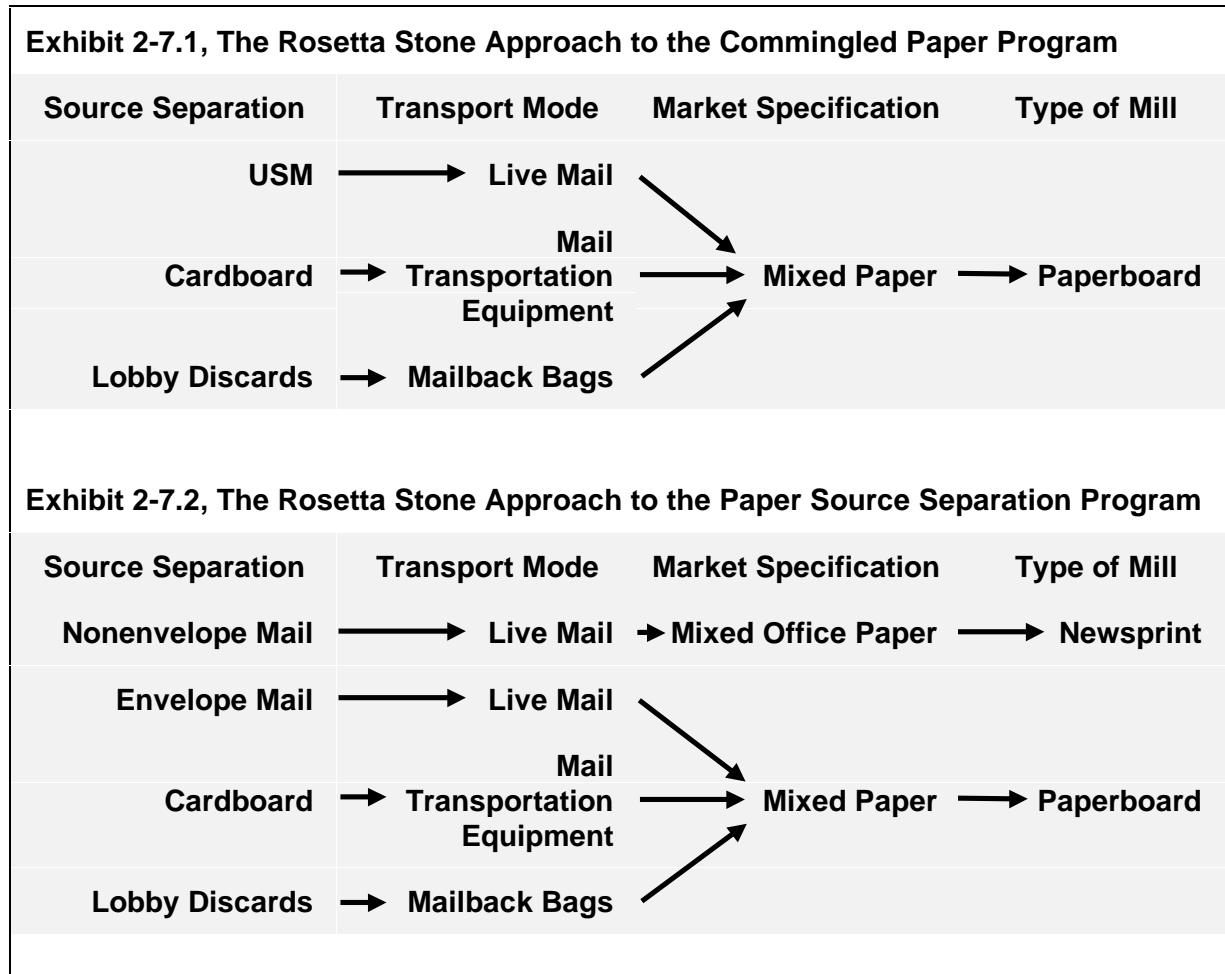
The Rosetta Stone was a basalt tablet discovered near the Egyptian town of Rosetta that provided the key for deciphering hieroglyphics.

Performance clusters should consider setting realistic short-term goals and have a timetable for achieving the goal of 100 percent participation in the recycling program. For example, a performance cluster may find that a short-term goal of 85 percent recycling of all recovered paper by the year 2000 will give it enough time to develop a successful program. Performance clusters that have achieved the goal of 100 percent participation in mixed paper recycling have generally required 2 to 4 years to reach that goal.

Once the performance cluster has identified long- and short-term recycling goals, the next step is to develop a recycling plan to attain them. A performance cluster should ask the following questions:

- What are the markets for the recyclable goods?
- How will the recyclable materials be collected?
- What resources will be required?

A helpful tool that can be used to put planning requirements in perspective is the “Rosetta Stone” approach (Exhibits 2-7.1 and 2-7.2). The Rosetta Stone approach refers to the tool that correlates the language that mill personnel use in referring to the types of recoverable material generated within the Postal Service with the languages of the paper broker and the Postal Service transport system. Using the “Stone,” a recycling coordinator should first research the market for the recyclables and then choose which market to pursue. The coordinator should design a plan that will meet the requirements of that market, including a transportation mode and paper separation strategy consistent with the needs of the market. The Rosetta Stone approach will help recycling coordinators design programs that meet their needs and can be used for both long- and short-term planning.



For example, short-term planning may require recycling coordinators to select transportation modes that are less cost-effective than other options. However, a long-range plan may incorporate capital investment strategies that change transportation modes to increase revenue potential. The same is true of separation methods. Commingling paper may be a sound short-term objective, but a recycling coordinator may plan a long-term goal of separating paper to maximize revenue. When a short-term plan is finished and a program is in place, the performance cluster can set more specific long-range objectives that further reduce costs and maximize revenue.

2-8 Step 5: Establish an Implementation Strategy

A good strategy for implementing a recycling program is to start with a pilot program. With that program, you can validate such important arrangements as transportation and logistics. Backhauling programs, for example, create large volumes of recyclable materials that require collection, storage, or transfer. A pilot program tests these

Note

A good strategy for implementing a recycling program is to start with a pilot program.

Note

A pilot program tests recycling plan arrangements before the performance cluster makes significant commitments.

arrangements before the performance cluster makes significant commitments. Regardless of the approach taken, a successful implementation strategy entails addressing all the items on the following checklist.

2-8.1 Implementation Checklist

Items should be addressed in order of priority shown:

- Issue a performance cluster recycling policy and plan consistent with Handbook AS-550-B, which supplements this guide.
- Set up a central collection facility with dock and storage area.
- Provide awareness training for employees.
- Use approved mail transport equipment for the recycling program.
- Place labels on containers and equipment in the recycling area.
- Place storage equipment at the central collection facility.
- Establish a pilot program for recycling.
- Inform Postal Service and highway contract route drivers of recycling collection and transportation strategy.
- Establish a method for tracking recycled materials.
- Establish contracts for recycling services through PMSCs.
- Renegotiate solid waste removal contracts to reduce costs.

2-8.2 Liaison Personnel for Recycling

Recycling should be integrated into the job responsibilities of every Postal Service employee. During the program's developmental phase, some additional time will be required to organize the program. At most small facilities, the recycling coordinator will be the facility manager. In contrast, larger facilities may require a recycling team composed of representatives from each functional area. In those cases, recycling liaison personnel may be appointed from each functional unit, depending on the size and type of facility. The DECC is the responsible coordinator at the performance cluster level.

2-9 Step 6: Identify Educational Requirements

Note

Recycling should become a part of the daily routine.

Recycling coordinators must promote recycling at their facilities. While recycling is still an unfamiliar activity in many facilities, it can be effective with the proper training and education. Coordinators should design recycling programs that can be a part of the “daily routine.” Promotion of the recycling plans and programs to all employees should be enthusiastic but realistic. Recycling programs have to grow; they do not happen overnight! Employee empowerment must be an integral element of any educational program if the recycling program is to be successful. The training must meet the needs of the recycling team and all other Postal Service employees. Exhibit 2-9 summarizes the four basic training and awareness levels that should be addressed as part of an effective recycling strategy.

Key Program Considerations	Recycling Coordinator	Employees		
	Training	Preprogram Awareness	Program Kick-Off	Ongoing Awareness
Level of training	In depth	Informational	Basic requirements	Refresher
Learning tools	Course at TTC*; instructions, AS-550-A	Posters; flyers; E-mail	Videos; overheads; posters	Videos; posters
Duration	4 to 8 hours	Informal	1 hour	15 minutes
Timing	3 to 6 months prior to launch	1 month prior to launch	Immediately prior to launch	Every 3 to 6 months after launch
Training topics	Detailed review of AS-550-A&B	Benefits; planned date; employee role	Benefits; requirement; procedures; policy	Local progress success stories; outstanding workers

*TTC = Technical Training Center, Norman, OK.

Just before launching the program, the recycling coordinators should develop short training programs for employees on how the recycling program works. After the program is activated, they should use posters and label the wastepaper containers to facilitate separation of materials. In addition, the recycling team should post recycling information on employee bulletin boards and disseminate other educational materials to employees. The postmaster should notify all

box holders when the DLM program is initiated. A copy of a recommended letter promoting the DLM recycling program is presented in Appendix A.

The Postal Service has adopted a standard logo for its pollution prevention and recycling program. Information on SOAR (Saving of America's Resources) can be obtained from Postal Service Headquarters, Environmental Management Policy. SOAR posters and other materials can be used in offices and delivery units to develop employee awareness of this program.

2-10 Step 7: Establish a Tracking and Evaluation System to Measure Progress

The recycling coordinator should monitor and evaluate the recycling program continuously to determine whether the objectives and goals of the program are being met and to identify additional methods to improve recycling. While the Postal Service may track numerous recycling trends each year, only the following 5 measurements are critical for monitoring your waste streams to determine whether you are meeting your program objectives:

- Total waste generated.
- Total waste recycled.
- Percentage of waste recycled.
- Cost to the Postal Service of recycling.
- Cost savings and revenue attributable to recycling (see, for example, the case study presented in Exhibit 1-6).

In addition to these benchmarks, the DECC should conduct a follow-up review to make sure the program is a success.

About 2 or 3 months after start-up, the DECC should conduct a "hands-on" review of recycling at each facility to help it through the initial learning curve of recycling. The review also signals that recycling is an established, continuing program that is actively supported by postal management. The focus of the review should be as follows:

- To find new opportunities to reduce trash disposal costs through recycling and the like.
- To determine whether recycling is successfully integrated into local postal operations.
- To meet the needs for additional training and equipment.

Notes

Monitor and evaluate the recycling program to determine whether the objectives and goals of the program are being met.

Two to three months after start-up, perform a "hands-on" review of recycling at each facility to help facilities through the initial learning curve of recycling.

Successful reviews, which focus on teaching, problem-solving, and providing additional support, can build local support and local “buy-in” for recycling.

2-11 The Next Steps

The seven steps we have outlined here are recommended to assist performance clusters in making good business decisions, defining long- and short-term recycling plans, and tailoring the recycling program to meet their present and future needs. In Handbook AS-550-B, we provide specific procedures for designing and implementing an effective recycling program. The model plan is based on procedures taken from other successful programs; it should be used to help recycling teams define goals and develop strategies for their own planning.

3 Purchase and Sale of Recyclable Material

Purchasing items made with recycled material is an important part of the recycling process and should be incorporated into the recycling plan. The Postal Service must buy products made from recycled material if we wish to sustain the demand for the recyclable material we generate. Such purchasing is called “closing the loop.”

In the first part of this chapter, we address purchasing products made from recycled material. In the second part, we present information on selling our recycled material, on volatile markets, and on procedures for waste removal contracting.

3-1 Buying Products With Recycled Content

The Postal Service is committed to purchasing recycled and environmentally preferred products because such purchasing creates markets for our recyclable material and for other generators of recyclable material. Before requesting the purchase of any product or equipment, Postal Service employees should determine whether it is on a preferred products list such as that issued by the General Services Administration. Purchasing products made with recycled content is not the responsibility of the PMSCs; rather, you must specify the standards that are to be met. However, only the PMSC can write a recycling contract. Remember, if you are not buying recycled, you are not recycling.

3-1.1 What Are Recycled Products?

Recycled products are those made from recovered materials, such as industrial scrap, agricultural material, or postconsumer-recovered materials. The following items are examples of some of the recycled paper products the Postal Service currently purchases:

- Paperboard products.
- Shipping materials.
- White office paper.
- Tissue products.
- Envelopes.
- Postcards.

Definition

Selling and purchasing items made with recycled material is called “closing the loop.”

Policy

If you are not buying recycled, you are not recycling.

Purchasing recycled goods is a wise economic decision and another way for us to do our part. When purchasing new paper and paperboard products or equipment, be sure to ask the purchasing specialist to include criteria for minimal recycled content standards.

3-1.2 Buy-Recycled Regulations

Note

The EPA recommends that procuring agencies set their minimum content levels no lower than recommended recovered content standards.

On October 20, 1993, President Clinton signed Executive Order (EO) 12873 titled Federal Acquisition, Recycling, and Waste Prevention. Although the EO does not apply to the Postal Service, we have, for business and environmental reasons, voluntarily adopted portions of it as our policy. Specifically, we have revised Postal Service policy to allow up to a 10 percent price premium to be paid for paper and paper products containing recycled material. (See *Postal Bulletin* 21935, dated December 19, 1996, for article entitled, "Pollution Prevention/Purchasing Policies for Paper and Paper Products with Recycled Content.")

Purchasing specialists and area environmental compliance coordinators should advise Postal Service employees about purchasing requirements for recycled-content paper. The U.S. Environmental Protection Agency (EPA) recommends that procuring agencies set their minimal content levels to meet the statutory requirements of the Resource Conservation and Recovery Act but no lower than the recommended recovered content standards. A list of the recycled paper products and their recovered content standards established by the EPA is presented in Appendix B, and the purchasing requirements are summarized below.

Corrugated Containers. The EPA recommends that the low end of the recommended ranges be 25 percent. The EPA's final Recovered Materials Advisory Notice (RMAN) recommends that corrugated containers contain 25 to 50 percent recovered fiber, including 25 to 30 percent postconsumer fiber.

Definition

Postconsumer material is material that has served its originally intended purpose and has been discarded.

Commercial/Industrial Tissue Products. Because of shortages in the market for postconsumer fiber, the supply of commercial products made of recovered fiber may not meet the demand. Consequently, the EPA does not recommend that agencies purchase 100 percent recovered fiber products. The EPA has revised the RMAN to reflect this issue with the following required product content:

- Bathroom tissue — 20 to 100 percent recovered fiber, including 20 to 60 percent postconsumer fiber.
- Paper towels — 40 to 100 percent recovered fiber, including 40 to 60 percent postconsumer fiber.
- Paper napkins — 30 to 100 percent recovered fiber, including 30 to 60 percent postconsumer fiber.

- Facial tissue — 10 to 100 percent recovered fiber, including 10 to 15 percent postconsumer fiber.

Printing and Writing Paper. Executive Order 12873 was revised on March 25, 1996, and now requires that printing and writing papers and computer paper have a 20 percent postconsumer content level.

3-2 Selling Recyclable Materials

3-2.1 Selecting Recycling Containers and Storage Systems

Recycling contractors may require that the recyclable paper be separated by grade. In some cases, special collection and storage containers will need to be purchased to meet the unique needs of the materials to be recycled. In other cases, especially in retail and processing and distribution facilities, existing Postal Service containers for collection and storage may be used. Before acquiring new containers, the recycling coordinator should ensure that the prospective collection and storage containers are compatible with the requirements of the recycling contractor. In many instances, recycling contractors may provide containers as part of the overall services offered to their clients.

3-2.2 Sale of Recyclables

Recycling coordinators must be familiar with the markets for recyclables and must find potential buyers. Once potential buyers have been located, the purchasing and materials service center must be contacted. The PMSC is responsible for developing contracts for the sale of mixed paper and other material in accordance with market specifications. Facility managers and recycling coordinators should not attempt to market waste paper on an individual basis. Rather they must work with the DECC and the PMSC to arrange for the collective sale of recyclables. While the contracting process for selling recyclable material is managed by the PMSC, the terms of the contract must be consistent with the performance cluster recycling plan.

3-2.3 Volatile Markets

Recycling should be based on a business decision. At times, the price of paper may drop, causing the recycling program costs to outweigh any realized revenue. However, a centralized transportation program still saves costs in the long run because it is still cheaper for facilities to consolidate materials for disposal at a landfill than to collect paper from dozens of half-empty containers throughout the performance cluster. When the paper prices decrease to a level that makes recycling costly, contact your area environmental compliance coordinator to discuss alternatives for offsetting recycling costs.

Notes

Unless you are renegotiating contracts, you are not saving money.

Individually, facilities can save solid waste removal costs, but collectively, our cost savings are even greater.

3-2.4 Consolidated Recovered Materials Management

Every facility that is recycling has an opportunity to save substantial costs by reducing its trash containers and renegotiating solid waste (trash, garbage, and waste) pickup contracts. These opportunities should be included in your facility recycling program. Take the following steps to reduce solid waste disposal costs:

- Monitor the amount of solid waste that accumulates after the recycling program has been implemented and estimate the reduction in accumulation.
- Reduce the Dumpster size to meet the need of the new solid waste quantities.
- Renegotiate the contract with the solid waste removal company to pick up trash less frequently and reduce pickup costs.
- Record the cost savings of the program.

Compared to other recycling options, centralizing provides the greatest savings and economies of scale. When many facilities fall under one consolidated solid waste removal contract, the Postal Service can negotiate the terms of the contract and further reduce the costs in all facilities with greater success than a single facility may achieve on its own.

Facilities and performance clusters that do not centralize should also be sure to renegotiate waste removal contracts and reduce rental fees by switching to smaller solid waste containers. Some problems that could occur with individual contracts include the following:

- Leased facilities (facilities in which waste removal is a part of a lease) may be required to renegotiate the whole lease to change the terms of the recycling contract. However, in most performance clusters, less than 20 percent of facilities are constrained by this type of waste removal contract.
- Local governments that have pickup arrangements cannot renegotiate a contract. However, in most cases, the Postal Service employs a commercial contractor to pick up solid waste.

4 Program Development and Implementation

Managers should encourage full employee participation by providing specific instructions for recycling, continuing education, and clear and regular directions about employees' roles in the effort.

4-1 What Conditions Affect the Selection of Recycling Methods?

After all recyclables have been identified (Step 2), they must be managed. Effective methods of recycling will vary from facility to facility and from performance cluster to performance cluster. The facility or performance cluster's location and size and the amount and kinds of recyclables it generates are major factors in determining the best recycling method. Further guidance on the management of recyclables (other than paper) is available from the area environmental compliance coordinator.

4-2 Understanding the Principles of Sortation, Collection, Transportation, and Storage

The principles of sound sortation, collection, transportation, and in some instances, storage should be considered when developing a recycling program. Collection and transportation refer to the assembly of recyclable materials (excluding hazardous materials), labeling, and transportation within the Postal Service system. Mixed paper, white paper, and cardboard constitute most of the recyclables generated at Postal Service delivery units. The collection, storage, and transportation of such materials should minimize labor requirements, transportation costs, and contamination through the strategies suggested in the following sections.

However, various aspects of storing, processing, and transporting recycled USM, DLM, and OCC can create safety hazards. Safety personnel should be consulted to evaluate the recycling operations and, if necessary, recommend proper work practices and controls. Some examples of potential safety issues are lockout procedures for balers and shredders, noise, lifting, and material handling.

Note

Principles of sortation, collection, transportation, and storage should be considered when developing a recycling program.

4-3 Collection and Sortation Strategies

4-3.1 Integrity of Materials

Recyclable material should be kept apart from prohibited contaminant materials, such as food waste, to prevent it from being contaminated. Market prices are better for higher grades of paper (i.e., white paper). Recycling team members and other individuals responsible for collection should be aware of each aspect of recycling and set up collection, sortation, and transportation procedures that maintain the integrity of the recyclable material. For some recyclable materials, such as USM, some contaminants may be acceptable (e.g., catalogs wrapped in plastic or window envelopes) as long as the contaminants do not exceed the maximum limits established by the paper broker or paper mill. Refer to Appendix C, Maintaining the Sanctity of USM, for further guidance on handling recyclable material.

Some paper mills in the United States may require some source separation of USM materials to meet their mill specifications for mixed paper. When a simple operation is required by the recycler, such as separating magazines wrapped in plastic from other USM, employees can easily make the separation at their letter cases. The easier it is to separate recyclables, the more employees will be willing to participate and the higher the recovery rate will be. If further processing of the recyclables is needed, the end user or broker will take care of it.

4-3.2 Sortation

While the way recyclables are separated and collected may vary throughout an area, collection and sortation methods should be uniform throughout a performance cluster. Uniform collection and sortation methods keep the program simple and understandable to all employees. And, if they are easy to follow, they will be more effective. Program options include one or a combination of two sortation methods: commingling, which does not require separation of the material, and source separation, in which the material is separated at the point of generation.

Definitions

Commingling does not require separation of the recyclable material.

Source separation requires separation of the materials at the point of generation.

Contaminants degrade the quality of USM and should be separated from the recycled USM as part of any source-separation strategy. Paper recyclers consider contaminants to be any nonpaper items (product samples, for example) enclosed in USM. Source separation of USM must be based on the look-and-feel test. The rule of thumb is as follows: If USM looks or feels as though it contains contaminants, it should be separated from the recyclable material and disposed of if no other recycling options are available. Undeliverable standard mail is considered to be live mail and it is not to be opened. Therefore, any separation should be based on the look-and-feel test.

4-3.3 Collection Convenience

The recycling system should make it convenient to collect material and separate it into designated containers. Separation and containerization should be incorporated into the office's normal daily routine, especially the separation and collection of lobby mail discarded by customers.

4-3.4 Storage Strategy

Recyclable materials should be collected and transported as soon as possible to the designated central collection point. Facilities that do not ship such materials daily should store them in approved containers that are waterproof and can be locked.

4-4 What Containers and Equipment Should Be Used?

In this guide, when we refer to containers, we are talking about receptacles used for storing and transporting mixed paper in Postal Service transport systems and in Postal Service facilities. In contrast, storage equipment refers to receptacles for storing mixed paper intended to be picked up by a recycling broker or paper mill. Existing Postal Service containers can almost always be used for collecting mixed paper for recycling. However, storage equipment is usually purchased on the basis of the pickup and transportation specifications of the recycling broker or paper mill.

Routing slips must be attached to Postal Service equipment to collect recyclable materials. Essential components of any successful recycling operation include the current infrastructure (transportation, equipment, personnel, etc.) and a well-designed materials-recovery strategy. Part of a well-designed recycling program is the use of equipment that would otherwise be returned to the processing and distribution center empty.

Containers used for transporting USM should be Postal Service-approved containers such as the 1033 (small) or 1046 (large) hampers and the all-purpose container. Do not use over-the-road containers for transporting USM. See Handbook PO-502, *Container Methods*, for a detailed description of the container options available.

Note

Undeliverable standard mail is considered to be live mail and is not to be opened.

4-4.1 Storage Equipment

Equipment that can be used to store and pick up mixed paper and cardboard includes roll-on containers, Dumpsters, roll-off containers, compactors, and flatbed trailers. The choice of the appropriate storage equipment must be made after considering the requirements of the recycling contractor or paper mill. As a rule, storage equipment should not be purchased before entering into a contract for the collection and transport of recyclable materials. The Postal Service has utilized the following types of storage equipment.

Rollaway Equipment. Rollaway equipment is used to store mixed paper that can be manually rolled onto a transport vehicle. These pieces of equipment may be carried away on flatbed trailers or they may have their contents dumped into packer trucks and then remain at the facility for continuing collection.

Dumpsters. Dumpsters are used to store mixed paper that is picked up and unloaded by truck hydraulic lift mechanisms. These containers remain at the facility for continuing collection.

Roll-Off Containers. Roll-off containers are used to store mixed paper that is loaded on flatbed trailers and removed from the site. When these containers are used, a backup container must be on hand or delivered by the transporter at the time of the pickup.

Compactors. Compactors are used to store and compress mixed paper at a central collection facility.

Covered Flatbed Trailers. Covered flatbed trailers that can be pulled away by a truck are used to store mixed paper and cardboard.

4-4.2 Processing Equipment

Generally speaking, Postal Service employees should not process or treat recyclables on site. However, in some cases it may be appropriate to reduce the volume of certain recyclable materials to cut transportation costs and make those materials more marketable for the recycling broker or paper mill. The two general types of equipment used for processing mixed paper and cardboard are balers and shredders.

Definition

Balers are used to compress and bind materials.

Balers. Balers, or baling machines, are designed to be operated either horizontally or vertically and are used to compress and bind materials. Their use should generally be limited to reducing the volume of collected cardboard and shrink-wrap plastic, both of which increase in value by compaction. Balers are useful tools at large central facilities where cardboard and shrink-wrap are consolidated for further processing and transfer. However, they may not be the best equipment for large, heavy-duty cardboard containers. Excessive time is required

to cut large, heavy-duty cardboard boxes, such as Gaylord® containers, into sizes that will fit into a baler. Managers must consider the time involved in baling the material and the economic benefits from the sale of baled cardboard when determining whether the material should be baled, loaded on a flatbed trailer, or compacted.

Shredders. Shredders are used by the Postal Service for accountable paper and other sensitive or valuable paper products only; they are not normally used to facilitate recycling. Stamp destruction committees are responsible for recycling obsolete stamp and product inventories in accordance with Postal Service policy. In most instances, recycling of accountable paper will require the purchase of a shredder. Some vendors will furnish shredders as part of their recycling services. The type of equipment required is normally specified in the recycling contract.

4-5 Transportation Strategy

After you have collected recyclable material, you should transport it over existing Postal Service routes to the central collection facility in the performance cluster. Existing Postal Service infrastructure (equipment and personnel) should be used to consolidate recyclable commodities (paper, cardboard, pallets, etc.) at a central location within the performance cluster. Ideally, the mail processing center serving retail offices on a daily basis is best suited for the consolidation or central location. Centralizing recyclable materials at one location increases the marketability of the products.

Recyclable materials can be transported from where they are generated to a central collection facility in one of six basic ways (three are long-term methods and three are short-term methods). The preferred way is backhauling, but that method is generally limited to transporting USM and other items that can be delivered through the mail (i.e., the mail-back option) or that can be classified as empty containers or equipment (i.e., the empty-equipment-run option). Other materials such as cardboard, plastic, and pallets may also be backhauled on Postal Service vehicles if they can be classified as empty equipment or containers. All other recyclable materials (e.g., batteries) should be collected using either municipal curbside collection, commercial collection, or drop-off centers.

4-5.1 Long-Term Solutions

Backhauling. Backhauling is generally limited to the collection of USM in designated containers or DLM in mail-back containers, both of which can be transported on a facility's empty equipment run for accumulation at a central location. Backhauling can also be extended to cover other materials that are classified as empty equipment or

Definition

Shredders are used by the Postal Service for accountable paper and other sensitive or valuable paper products; they are not normally used to facilitate recycling.

Note

Current Postal Service equipment and personnel may be used to transport recyclable commodities for consolidation at a central location within the performance cluster.

Policy

Centralizing is preferred for recycling. The same mail truck delivers mail from the central facility and returns loaded with recyclable material, which is taken to the recycling facility by an outside contractor.

Note

The milk run is less preferred, since each mail truck leaving the central facility for local post offices returns empty. An outside contractor goes to each local post office collecting recyclable material and takes it to the recycling facility.

containers rather than as mail. For example, worn-out cardboard and plastic containers can be returned to central equipment storage facilities for repair or recycling by labeling them so they can be distinguished from functional containers. Collecting recyclables at a central point helps control the increasing cost of having such materials hauled to the landfill. A copy of a recommended procedure that outlines how to participate in an USM backhauling program is presented in Appendix D.

Dock Transfer. In some cases, recyclable materials cannot be conveniently stored at a processing and distribution center. In these cases, the facility should consider a dock transfer strategy. This modified backhauling approach is a method to be used by a facility that has no storage space for recyclables. It requires that on the transportation run to the central location, materials be transferred from the incoming dock to an outgoing dock where space is available. For example, a delivery unit within the performance cluster may have more dock space than the processing and distribution center. Thus, the delivery unit would be the central location.

Milk Run. In some instances, backhauling is not feasible because not enough space is available or because of other logistical constraints. A milk run may then be an option. In this method, recyclable materials are picked up at multiple locations. The transportation preferably is provided by the contractor but can also be provided by the Postal Service using an additional transportation run scheduled from the central facility. Since this method requires increased deployment of vehicles, it is not the preferred transport option.

4-5.2 Short-Term Solutions

Municipal (Curbside) Collection. Municipal, or curbside, pickup programs should be used only as a last resort to keep materials from being sent to landfills. Facility managers who use this transport option may continue this type of service until performance cluster recycling strategies are established.

Commercial Collection. Many commercial collection companies make regular pickups or offer on-call service for high-grade paper, aluminum, mixed paper, and cardboard. This service may be provided for a fee at retail facilities (e.g., delivery units) since they do not usually generate enough recyclable materials to warrant payment for recyclables or free pickup.

Drop-Off and Buy-Back Centers. Drop-off and buy-back centers are the most common means that communities use for recycling. Drop-off centers may be simple, unattended containers or fully equipped facilities that receive, process, and store materials. In contrast, buy-back centers pay for recyclables delivered to them. These centers are

usually operated by municipalities, secondary material dealers, beverage container manufacturers, or other profit or nonprofit groups. In general, facility managers should not use drop-off or buy-back centers for their recyclables. However, smaller postal facilities may consider those options on a short-term basis until performance cluster recycling strategies are established. Facility managers participating in such programs must monitor their recycling activities and track revenues in accordance with the account indicator codes (AICs) described in detail in 4-7.3.

4-6 Treatment and Disposal

While Postal Service policy is to recycle paper whenever possible, not all materials can be reused or recycled. Materials that are not recycled because they have no market or because recycling is not a cost-effective alternative are to be taken to landfills as the last resort. Landfills are a necessary component of a materials management strategy. Burning solid waste (converting waste to energy) significantly reduces volume but leaves residual material such as fly ash and bottom ash. Federal and state regulations require that solid waste be disposed of in facilities meeting federal and state landfill standards.

4-7 Contracting, Accounting, and Reporting

4-7.1 Contracting for Cost Avoidance

The Postal Service has the opportunity to develop a comprehensive recycling program to reduce its expenditures for the removal of discarded material. When a recycling program is implemented at postal facilities, those removal costs should decrease. Renegotiating removal contracts to reduce the number of times a Dumpster is emptied will enable the Postal Service to benefit fully from the economic advantages of recycling.

4-7.2 Record Keeping

What Records Should Be Kept? Postal Service employees must track the annual reduction in paper and cardboard volumes and costs that results from recycling. Keeping records is an essential management practice because it allows facilities to measure the benefit of the recycling program. It is best to keep receipts from all transactions for 3 years. Management Instruction AS-550-95-14, *Recycling of Discarded Mail and Undeliverable Bulk Business Mail*, provides further details on managing USM and DLM.

Objective

In general, facilities should not use drop-off or buy-back centers for their recyclables. Smaller postal facilities, however, may consider those options on a short-term basis.

Volume-to-Weight Conversion Charts. Recycling coordinators should utilize Postal Service-owned weight scales or volume-to-weight conversion charts to estimate the weight of materials before those materials are removed by recycling coordinators (see chart in Appendix E). A Postal Service weight estimate should be maintained on file for every commodity pickup until the weights submitted by vendors have been validated.

4-7.3 What Procedures Are Used to Account for Recyclables?

Postal personnel who receive revenue from selling recyclables — such as USM, DLM, and OCC — must report it on Form 1412, *Daily Financial Form*, and must use the following AICs to report funds:

- AIC 149, Sale of Wastepaper, Twine, and Dead Mail — This code should be used for proceeds from the sale of paper and paperboard, including USM, DLM, and OCC. Receipts for those recyclables should be submitted to the designated finance unit responsible for AIC 149.
- AIC 156, Funds Received from Sale of Miscellaneous Items and Equipment — This code should be used for proceeds from the sale of miscellaneous items and equipment and also pallets, plastics, items that are obsolete or cannot be repaired, and aluminum cans and glass.

As discussed in 1-6, recycling provides the opportunity to improve economic value added by increasing operating income and reducing operating costs, thus improving the profitability of the Postal Service. Facilities can use the AICs to track the financial benefits attributable to their recycling efforts and those of the performance cluster. The performance clusters must enter the revenue credits for recycling in the AICs stated above, but those codes should be placed under a district finance number so that the performance clusters can track their progress in cutting costs and realize the benefit from recycling revenues.

Policy

Postal personnel who receive revenue from selling recyclables must report it on Form 1412 and use the appropriate AIC.

5 Where to Find More Information

Recycling survey information collected by the Postal Service details the results of nationwide recycling studies. These studies are cited below and are available by contacting your area environmental compliance coordinator. For more information on recycling, including industry news, marketing information, and potential buyers for your recyclables, refer to the organizations and Internet sites listed in 5-2.

5-1 Abstracts

The Postal Service has conducted recycling surveys and waste stream assessments in almost every area of the United States. Among these studies, the following are two important references:

1. *Results of the United States Postal Service Postmaster Recycling Survey*, Final Report prepared for the United States Postal Service National Task Force on UBBM Recycling, EMCON, Inc., Middletown, New York, March 1996.

The Postal Service contracted with EMCON, Inc., in late 1995 to distribute a survey on recycling to postmasters nationwide and compile the results. Some 67 percent of the postmasters responded. The survey indicated that 47 percent of the facilities had recycling programs in 1995, an increase of 34 percent over the number with recycling programs in 1994. In 1995, 35 percent more material was recycled and nearly half of that recycled material was USM (also known as UBBM), the largest component of recyclable material and the largest component to be recycled. In 1995, more than twice as many facilities had USM recycling programs as in 1994. Less recoverable material was generated in 1995 than in 1994 at the surveyed facilities, and that led to the need to dispose of less material and a resulting decrease in disposal costs (increased cost savings). The report provides summary statistics on each Postal Service area and performance cluster.

2. *Recycling Findings and Recommendations, UBBM Recycling*, Final Report of the United States Postal Service National Task Force on UBBM, March 1995.

The National Task Force on UBBM was established by the Postal Service to increase the recycling of USM and improve mail deliverability. The task force included representatives from the U.S. Environmental Protection Agency, American Forest and Paper Association, Direct Marketing Association, ADVO, and several paper companies. It assessed the advantages and disadvantages of current and future implementation of USM recycling programs throughout all 10 Postal Service geographical areas. Among the task force's findings and recommendations were the following:

- Nationwide, USM constitutes about 22.2 tons of potential recyclables per facility per year, and mail discarded in post office lobbies (DLM) amounts to 10.3 tons per facility per year.
- Disposal costs for those materials are a drain on Postal Service resources. In 1994, the Postal Service saved \$1.4 million by recycling the materials and another \$2.9 million in cost savings by not having to dispose of them.
- The task force recommended a strategy for nationwide implementation of recycling through FY99.

Your area environmental compliance coordinator can provide additional information on recycling material assessments that have been conducted in your area. The following important national resource organizations can also provide recycling information.

5-2 Organizations

5-2.1 Paper

AMERICAN FOREST AND PAPER ASSOCIATION INC
1111 19TH STREET NW SUITE 800
WASHINGTON DC 20036-3603
(800) 878-8878

AMERICAN PAPER INSTITUTE
260 MADISON AVENUE
NEW YORK NY 10016-2401
(212) 340-0654

TECHNICAL ASSOCIATION FOR THE PULP AND PAPER
INDUSTRY
15 TECHNOLOGY PARKWAY SOUTH
NORCROSS GA 30092-2928
(800) 332-8686

US CONFERENCE OF MAYORS
1620 EYE STREET NW SUITE 600
WASHINGTON DC 20006-4005
(202) 293-7330

5-2.2 General

ASSOCIATION OF STATE AND TERRITORIAL SOLID WASTE
MANAGEMENT OFFICIALS
444 NORTH CAPITOL STREET NW SUITE 315
WASHINGTON DC 20001-1512
(202) 624-5828

ENVIRONMENTAL DEFENSE FUND
257 PARK AVENUE SOUTH
NEW YORK NY 10010-7304
(212) 505-2100

GOVERNMENTAL REFUSE COLLECTION AND DISPOSAL
ASSOCIATION
8750 GEORGIA AVENUE SUITE 123
PO BOX 7219
SILVER SPRING MD 20910-7219
(301) 585-2898

KEEP AMERICA BEAUTIFUL INC
MILL RIVER PLAZA
9 WEST BROAD STREET
STAMFORD CT 06902-3734
(203) 323-9897

NATIONAL SOLID WASTE INSTITUTE
10928 NORTH 56TH STREET
TAMPA FL 33617-3004
(813) 985-3208

RECYCLED PRODUCTS GUIDE
AMERICAN RECYCLING MARKET INC
PO BOX 577
OGDENSBURG NY 13669-0577
(800) 267-0707

5-2.3 Internet Resources

Recycler's World — Paper Recycling
<http://www.recycle.net/recycle/Paper/index.html>

Cyberville Webworks
<http://199.2.26.130/homepages/54365/cyberville.html>

A Example of a Recommended Letter to Announce a Recycling Program

POSTMASTER
COLUMBIA POST OFFICE



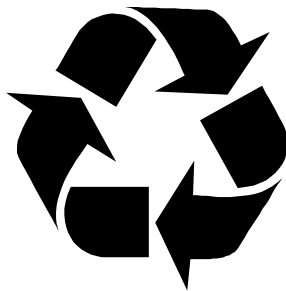
Dear Post Office Customers:

We are pleased to announce that we have begun a recycling program here at the post office. Effective immediately, I would ask you to use the recycling containers located in our lobby for any mail you wish to discard.

Please open all envelopes prior to recycling them, in order that we may be sure you intend to discard them for recycling. The lobby containers are clearly marked for recycling and a list of acceptable paper items is posted near the containers.

The mail you take home can also be recycled through your local recycling program. Please see the reverse side of this notice for more important local recycling details.*

Thank you for helping us do our part in preserving our environment.



*This sector should be included only where a community offers a mixed paper collection program that accepts discarded mail.

B Content Standards

EPA-Recommended Minimum Content Standards of Selected Papers and Paper Products		
Paper Product	Recovered Fiber (%)	Postconsumer-Recovered Fiber (%)
Newsprint	20 – 100	20 – 85
Uncoated Printing and Writing Papers:		
Offset paper (e.g., offset printing paper, book paper, and bond paper)	20	20
Tablet paper (e.g., office paper such as notepads, stationery, and other writing papers)	20	20
Forms bond (e.g., forms, computer printout paper, and ledger)	20	20
Envelope paper:		
Woven	20	20
Kraft:		
White and colored (including manila)	10 – 20	10 – 20
Unbleached	10	10
Text and cover paper (e.g., cover stock, book paper, stationery, and matching envelopes, and other writing paper)	20	20
Supercalendered	20	20
Machine finish groundwood	10	10
Papeteries	20	20
Check safety paper	10	10
Cotton fiber papers	10	10
Tissue Products:		
Bathroom tissue	20 – 100	20 – 60
Paper towels	40 – 100	40 – 60
Paper napkins	30 – 100	30 – 60
Facial tissue	10 – 100	10 – 15
General purpose-industrial wipers	40 – 100	40

EPA-Recommended Minimum Content Standards of Selected Papers and Paper Products (continued)		
Paper Product	Recovered Fiber (%)	Postconsumer-Recovered Fiber (%)
Paper and Paperboard Packaging Products:		
Corrugated packaging:		
<300 psi	25 – 50	25 – 30
300 psi	25 – 50	25 – 30
Solid fiber boxes	40	40
Folding cartons	100	40 – 80
Industrial paperboard (e.g., tubes, cores, drums, and cans)	100	40 – 80
Miscellaneous (e.g., pad backs, covered binders, book covers, mailing tubes, and protective packaging)	90 – 100	75 – 100
Padded mailers	5 – 15	5 – 15
Carrierboard	10 – 100	10 – 15
Brown paper (e.g., wrapping paper and bags)	5 – 40	5 – 20
Tray liners	100	50 – 75

C Maintaining the Sanctity of USM

Proper Recycling Procedures for Maintaining the Sanctity of USM, Discarded Lobby Mail, and Excess Standard Mailpieces

The recycling of undeliverable standard mail (USM), discarded lobby mail, and excess standard mailpieces has raised numerous questions concerning appropriate procedures for recycling mail pieces that contain other recyclable or reusable items such as pens, samples or shampoo, coins, floppy disks, pins, paint samples, etc. These items are not part of the mixed paper recycling program set forth in Management Instruction AS-550-95-14, *Recycling of Discarded Mail and Undeliverable Bulk Business Mail*. Advertising the reuse or recycling of contaminants “contained in” or serving as “envelopes for” USM has raised several important questions. Here are some of the most common.

Can USM be opened to remove nonrecyclable items?

Undeliverable standard mail is live mail and is not to be opened to remove nonrecyclable items.

Can postal employees open and remove clearly identifiable items from USM to be recycled or donated?

No. Undeliverable standard mail is mail that cannot be opened. If USM contains items that may be considered contaminants (e.g., shampoo samples, pens, coins, etc.) that could interfere with its recycling as “mixed paper,” the DECC or facility manager should determine whether the paper broker mills can separate these contaminants through the pulping, screening, flotation, and centrifugal cleaning process. If the type or quantity of contaminants exceeds the specifications for “mixed paper” established by the paper broker or paper mill, then these USM pieces should be disposed of as solid waste.

What should be done with packages that are USM and not clearly identified as to their content?

Undeliverable standard mail pieces should be recycled on the basis of their “look and feel.” Without opening USM, it should be apparent from feeling the package when some nonpaper items are present inside the package or envelope. Similarly, it is apparent from looking at certain pieces of USM that they are wrapped in materials that may not be acceptable to the paper

broker or paper mill (e.g., plastic or aluminum foil). In many cases, USM pieces that have hidden or visible contaminants may be acceptable to paper brokers or paper mills.

Often excess mailings are received at the post office with a sample enclosed such as a pen. Can we open the mailings to remove the pen so we can recycle the rest of the mailings?

Excess mail pieces are also considered live mail and therefore are not to be opened. These USM pieces should be “recycled” on the basis of their “look and feel” as well. In the case of “current resident” mailings, the mailer should be informed to reduce future mailings to coincide with the total number of delivery points within the community.

Is it acceptable to recycle samples contained in USM (e.g., shampoo, pens, etc.) if the mailer gives permission to allow his or her excess mailings or USM to be donated to a nonprofit organization of the Postal Service’s choice?

The Postal Service cannot donate excess mailings or USM to a nonprofit organization. This policy avoids the release of address-sensitive materials and maintains the sanctity of the mail. In addition, as an independent establishment of the executive branch of the federal government, the Postal Service may not donate recyclable materials to specific nonprofit organizations that may benefit from their receipt at the expense of other organizations who are not so favored. Sale of recyclable materials such as USM is acceptable provided that address-sensitive materials are protected from disclosure and that the sale of these materials is undertaken through a contract.

Even if a mailer gives permission to allow excess mailings to be donated to a nonprofit organization, the Postal Service cannot release these address-sensitive materials unless:

- They are released through a contract or other written agreement approved by the purchasing and materials service center.
- The addressee’s name and address are removed from the recyclable USM materials before release to the recycler or end user.

Alternatively, the excess USM materials generated by a specific mailer may be donated to a specific charity if the mailer submits a letter authorizing the Postal Service to release the USM materials for reuse or recycling and address labels are

deleted. Such authorization may be requested on a blanket approval basis for all standard mailings made by that mailer that generate USM.

Overall, DECCs should bear in mind that the Postal Service's primary mission is delivery of the mail. If the administrative costs of recycling excess mailings containing reusable or recyclable materials outweigh the environmental benefits, strong consideration should be given to disposal of these items. Alternatively, contracts for recycling of USM may be expanded to require contractors to take all materials and develop a recycling program for any USM "contaminants" as well. This, of course, would reduce the financial benefits of recycling USM.

D How to Participate in a Backhaul Program

Use the following guidelines to participate in a backhaul program:

- Verify that mail is undeliverable.
- Identify and set aside paper recycling contaminants via the “look-and-feel” test: samples, discs, tapes, plastic, etc.
- Place USM and excess mailings in recycling containers.
- Cover the full container and ensure that it has a routing slip attached.
- Remove discarded lobby mail bags from lobby containers. Use a commercially available leaf bag with a G-10 penalty label adhered to it.
- Transport containers back to the central location.
- Off load containers at the central collection facility and set them at the designated staging area.
- Empty containers into the central recycling containers.
- Ensure that empty containers are placed in the empty equipment stream for reuse.

Note: Customize to be consistent with the performance cluster recycling plan.

E Volume-to-Weight Conversions

Exhibit E-1, Volume-to-Weight Conversion Table			
Material	Volume	Weight (lb)	Tons
Newsprint	One cubic yard (uncompacted)	600	0.3
Newsprint	One 12-inch stacked bundle	35	0.0175
Corrugated Cardboard, Loose	One cubic yard	300	0.15
Corrugated Cardboard, Bailed	One cubic yard	500	0.25
Glass	One full grocery bag	16	0.008
Aluminum Cans	One full grocery bag	1.5	0.00075
Aluminum Cans	One cubic yard (whole cans)	74	0.037
Discarded Mail	Flat tray (1257)	32	0.016
Discarded Mail	Letter tray (1262)	56	0.028
USM Flats	Flat tray (1257)	32	0.016
USM Letters	Letter tray (1262)	12	0.006
USM (Letters and Flats)	One 30-gallon bag	56	0.028
USM (Letters and Flats)	One full small hamper	440	0.22
USM (Letters and Flats)	One full large hamper	500	0.25
Computer Printout Paper	One cubic yard (uncompacted)	665	0.3325
Pallets, Wooden	36 inches by 36 inches by 6 inches	23	0.0115
Pallets, Compressed Wood	36 inches by 36 inches by 6 inches	42	0.021
Pallets, Plastic	36 inches by 36 inches by 6 inches	19	0.0095
Mixed Refuse	One cubic yard	400	0.2
Mixed Refuse	One 30-gallon garbage bag	59	0.0295
Mixed Refuse	One 30-gallon can	59	0.0295

F Acronyms

AIC	—	account indicator code
DECC	—	district environmental compliance coordinator
DLM	—	discarded lobby mail
EO	—	Executive Order
EPA	—	Environmental Protection Agency
EVA	—	economic value added
GSA	—	General Services Administration
OCC	—	old corrugated cardboard
PMSC	—	purchasing and materials service center
RMAN	—	Recovered Materials Advisory Notice
SOAR	—	Saving of America's Resources
TTC	—	Technical Training Center
UBBM	—	undeliverable bulk business mail (also known as undeliverable standard mail)
USM	—	undeliverable standard mail (formerly known as UBBM)
VMF	—	vehicle maintenance facility

G Key Terms

Definitions

- centralizing** — using the Postal Service infrastructure (personnel, transportation, and equipment) to consolidate recyclables.
- closing the loop** — purchasing recycled content materials that could be made of waste materials originating from the Postal Service.
- collection** — assembling waste materials within the Postal Service system.
- commingled recyclables** — a mixture of several recyclable materials in one container.
- compactor** — a power-driven device used to compress materials into a smaller volume.
- corrugated paper or old corrugated cardboard** — paper or cardboard manufactured in a series of wrinkles, folds, or alternating ridges and grooves.
- curbside collection** — programs in which recyclable materials are collected at the curb, often from special containers, and taken to various processing facilities.
- disposal** — removal of solid and/or liquid waste to a landfill or disposal facility (incinerator) or their discharge to water, air, or the environment.
- drop-off center** — a central collection point where people take recyclable materials and deposit them in designated containers.
- economic value added (EVA)** — the long-term value of a business and a function of revenue, operating costs, and capital costs.
- energy recovery (waste to energy)** — the generation of power in the form of steam or electricity from the burning of garbage.
- garbage** — spoiled or waste food that is thrown away, generally defined as wet food waste. Garbage also is used as a general term for all discarded products.
- gaylord** — (postal) a 3' x 3' x 5' box made of double-thickness cardboard; (commercial) a 4' x 4' x 4' box made of single-thickness cardboard. The box is used to collect recyclable materials as opposed to using a baler or trash container.

hazardous waste — waste material that may pose a threat to human health or the environment, the disposal and handling of which is regulated by federal law.

high-grade paper — relatively valuable types of paper such as computer printouts and other white paper.

incinerator — a facility that burns solid waste, often converting waste to energy.

infrastructure (Postal Service infrastructure) — existing USPS transportation networks, personnel, and equipment.

packaging — a product container, product cushion, or wrapping around a product or container. Packaging may also refer to preconsumer shipping and storage containers as well as packaging on the shelf.

performance cluster — a business unit consisting of customer service facilities and at least one processing and distribution facility.

recovered materials — waste material and byproducts that have been recovered or diverted from solid waste, excluding materials and byproducts generated from, and commonly used within, an original manufacturing process.

recyclable materials — materials that still have useful physical or chemical properties after serving their original purpose and that can be reused or remanufactured into new products.

recycled materials — materials, otherwise destined for disposal, that have been collected, reprocessed, or remanufactured and made available for reuse.

recycling — the process by which materials otherwise destined for disposal are collected, reprocessed or remanufactured, and reused.

reduction — the processing of waste materials so as to decrease the amount of space the materials occupy, usually by compacting or shredding (mechanical), incineration (thermal), or composting (biological).

resource recovery facility — any place, equipment, or facility designed and/or operated to separate or process solid waste into usable materials or to incinerate solid waste to create heat and energy.

reuse — the use of a product more than once in its same form for the same purpose, as when a soft-drink bottle is returned to the bottling company for refilling.

solid waste — discarded materials (other than gases or liquids) that are not separated for recycling, composting, or reuse. They include waste, garbage, refuse, trash, rubbish, and other disposed materials resulting from commercial, institutional, industrial, mining, agricultural, residential, or community activities.

source reduction — the design, manufacture, acquisition, and reuse of materials to minimize the quantity and toxicity of waste produced. Source reduction prevents waste either by redesigning products or by otherwise changing patterns of consumption, use, and waste generation.

transfer — the removal of waste materials from the Postal Service system and their transportation to a recycling center or disposal facility.

transfer station — a permanent facility where waste materials are taken from smaller collection vehicles and placed in larger vehicles — including truck trailers, railroad cars, or barges — for transport. Recycling and some processing may also take place at transfer stations.

treatment — reduction of the toxicity and/or volume of waste.

waste — any material discarded as worthless, defective, or of no further use that, when disposed of, may pose a threat to human health or the environment.

waste stream — the total flow of solid waste from homes, businesses, institutions, and manufacturing plants that must be recycled, burned, or disposed of in landfills.

Concepts

quantity of waste — quantity information deals with the amount of waste, by weight and volume, generated per week, month, or year. It helps in decisions about collection, storage, transfer, and /or disposal at a recycling center or other facility. This information is important for marketing recyclables.

composition — the relative amounts of various waste components (for example, plastic, paper, cardboard, and metal), expressed as a percentage of the total waste stream.

source — source information links components of the waste stream to the specific facility operations that generate them (for example, platform operations and delivery units). It helps in targeting waste-management activities and in setting goals for coordinating the recycling plan.