



Bergen County Utilities Authority

The Recycling Handbook for Businesses



INTRODUCTION

The Bergen County Utilities Authority (BCUA) assists each municipality in the county to comply with state recycling mandates. This Commercial Recycling Handbook is presented by the BCUA in order to help municipalities and businesses meet their recycling goals.



Private businesses in the county must recycle in order to comply with state law. The purpose of this handbook is to give businesses general information about commercial recycling so that one may develop or expand a recycling program in the work place and become part of the larger recycling program being implemented in the community. Since businesses can make major contributions toward increased recycling, municipal recycling coordinators work closely with all kinds of commercial establishments.

In Bergen County, there are more than 30 individual materials currently being recycled from both the residential, as well as commercial sectors. To put this in perspective, during the past ten years Bergen County residents and businesses have recycled over 600,000 tons of clean newspaper alone, saving over 10 million trees.

Please note that this handbook is a guide for office paper, corrugated cardboard, aluminum, and glass from commercial businesses. You can get additional recycling information and assistance by contacting your municipal recycling coordinator, or by calling the BCUA's Environmental Programs Hotline at 201-807-5825. For more detailed information, the Bergen County Utilities Authority's web site may be accessed at www.bcua.org.



The following are some general points to remember when you recycle office paper, corrugated cardboard, and aluminum and glass:



OFFICE PAPER:

High-grade paper consists of computer paper, tab cards, white letterhead, ledger and non-glossy copy paper.

Office paper can be first collected at individual desks by placing it in personal recycling bins. Later, it can be transferred to a central storage container.

Mixed paper (junk mail, colored paper, phone books) can also be recycled.

The price for the office paper will depend on the quantity and quality of the materials recycled.

CORRUGATED CARDBOARD:

Corrugated cardboard has two smooth sides and a layer of ribbed paper between.

It can sometimes be mixed with brown paper bags and other paper items (check with vendor for specifications.)

It may be flattened and tied with twine, baled, or compacted to increase storage and collection efficiency.



ALUMINUM AND GLASS/ALUMINUM CANS:

Aluminum cans are light-weight and can be easily crushed. When they are crushed, they will take up less storage space (check with recycling vendor for specifications.)

Aluminum cans, such as soda cans, may or may not be mixed with bi-metal, or tin-coated steel



cans (like coffee cans) (check with recycling vendor for specifications.)
Aluminum cans have a high market value.



GLASS BOTTLES AND JARS:

They should not be mixed with other types of glass such as window panes, mirrors, or light bulbs.

Glass bottles or jars may or may not be sorted separately by color (check with recycling vendor for specifications.)

STORAGE AND COLLECTION:

Do not mix recyclables with the regular waste your business generates. Instead, keep them separate so they do not become contaminated. To store recyclables efficiently, and/or to increase their market value, you may find it helpful to do some basic material processing, such as flattening aluminum cans or corrugated cardboard.

You should set aside a separate space or separate container(s) to store recyclables until they are picked up and delivered to a market. In some situations, refuse containers may hold recyclables while in other circumstances you may need special recycling containers and receptacles.

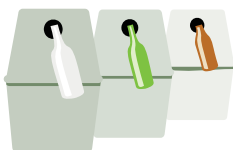


A recycling market may provide for collecting and transporting of recyclables to a central processing facility or recycling industry. You may also arrange to have this service provided by private haulers or, if available, by municipal crews.



MATERIALS MARKETING:

In order for your recycling program to be successful, you must first locate a company that will accept or buy your recyclables. Each market has its own material specification requirements that you must meet before the material is recycled. You may prefer to arrange a contract with a market for the purchase of your business's recyclables at a set price for a certain period of time.



GLASS:

Clear Glass Bottles and Containers: This includes clear glass beverage and food containers such as clear soda, juice, or beer bottles, peanut butter and mayonnaise jars, etc.

Colored Glass Bottles and Containers: Includes food and beverage containers. There are three subtypes: Green, Brown and Other Colored Glass.

Remainder/Composite Glass: This includes glass that cannot fit into any other type or subtype. These items are mostly made of glass, but have been combined with other materials like Pyrex, Corningware, crystal, mirrors, windshields, etc.



OFFICE PAPER:

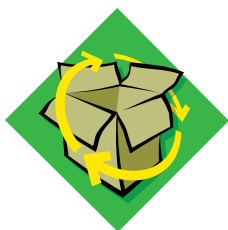
Computer Paper: Continuous paper printed on an impact printer, usually solid white, including blue- or green-lined, pin-feed printer paper that is untreated and uncoated. This does not include laser printed paper.



White: Includes white computer paper, copy paper, letterhead, white notebook paper and ledger paper.

Colored: Same as white, only the paper is colored.

File stock: A specialty grade of (mixed) office type papers that is derived from discarded files. These may come from offices, records storage, records centers, archives, libraries, etc. Mostly white and colored ledger but may also include carbonless paper, bleached file folders, paper clips, binders, etc.



Mixed: A mixture of various grades of recyclable waste paper not limited by fiber content and includes most types of clean and dry paper including glossy, white ledger and computer papers, newspapers, magazines, catalogs, phone books, cards, laser- printed white ledger, windowed envelopes, sticky notes, and often contains corrugated and brown paper.

Corrugated Cardboard: It is used for shipping containers and is manufactured from a fluted paperboard, called corrugating medium, sandwiched between two paperboards called linerboard.

NOTE: Contaminants can significantly decrease the market value of your recyclable paper. Remember, you need to keep certain items out of your recyclable paper: food containers, (bottles, cans, plastic cups, polystyrene, aluminum, food wrappers, etc.), food waste, restroom waste, and carbon. Check with your recycler to find out what other materials are unacceptable in your recycling program.

Go to www.bcua.org to obtain a list of potential markets for office paper, corrugated cardboard, glass and aluminum, as well as many other items.



EQUIPMENT:

For Aluminum and Glass:



Various kinds of equipment are available for commercial businesses. This equipment is helpful for crushing or flattening aluminum cans, and for storing these materials until they are collected.

If you have ample room, you can obtain mechanical equipment that flattens cans and then feeds them into separate storage bins. However, your glass may still require manual sorting by color before being stored. The equipment best suited for your business depends in part on the kind of business you have, your space limitations, how much recyclable material you generate and the processing requirements of the markets to be used.

For Corrugated Cardboard:

There is both large and small-scale equipment available for use in commercial businesses for baling corrugated cardboard. Baling the corrugated cardboard can increase the net price, decrease the storage space and make the handling process easier.

For Office Paper:



There is various equipment and accessories which exist to facilitate the collection of office paper. Companies manufacture and sell recycling collection and storage containers. In addition, many office suppliers sell desktop containers/folders which may be utilized for storing office paper at an individual's desk. The paper stored in these containers can be transferred to the larger collection container within your office.



SETTING UP A RECYCLING PROGRAM:

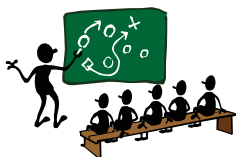


Select a Program Coordinator:

In order to promote a successful recycling program, the employer needs to select someone who is well-organized, and holds a good rapport with his/her coworkers. It also helps if this person is enthusiastic and can promote a sense of teamwork. In addition to a Program Coordinator, it may be helpful to enlist the help of some selected Monitors. They should be well trained and have a good understanding of how the recycling program should run. This will ensure that the recycling program within your workplace runs smoothly and efficiently.

Program Coordinator:

The responsibilities of the coordinator may include selecting a recycler (a list of markets located in and around the Bergen County area can be found on the Bergen County Utilities Authority's website, www.bcua.org), developing the collection system, educating fellow employees, and tracking the success of the program. The coordinator also may be the point of contact for the recycler or the building manager and should work with the purchasing department to establish a "buy recycled" program.



When the appointed coordinator is contacting a potential recycler, it is important that he/she ask the following questions:

What materials does the recycler presently accept?

How should materials be prepared for recycling?

What is the current price for each material?

What minimum quantities will the market accept?

What hours and days are they open?

Will they provide storage containers, equipment or collection services?

What method of payment do they accept? (Cash, check, credit card, etc.)

Are contracts required or available?



Monitors:

Monitors may be given various responsibilities, including keeping containers contaminant-free, ensuring the containers are emptied periodically, and encouraging employees to participate.

Getting Staff to Participate:

Promotion - that is the key to success. You cannot expect many positive results if your employees are not informed as to how the program works, as well as its benefits. Explain the recycling process and how employees can participate by collecting recyclables and by using products made from recycled materials. The support of all employees is essential. These are a few ways to get your employees both informed and involved:

Send a memo. A memorandum signed by the employer and directed to all employees,



stating the benefits of recycling and describing ideally how your program will work is a good way to start your program. Here is an example:

“Dear Employees:

At Company X, we value our employees and the environment they live in. It is incumbent upon us all, as stewards of the environment in which we live, that we do our part to prevent unnecessary waste, energy use, and pollution, and to promote the concepts of conserving our natural resources and extending our valuable landfill capacity. Individually, in some small way, we can each do our part towards these goals. It is with this in mind, that I introduce to you our new Recycling Program which will begin its kick-off on Monday morning. You are all invited to gather in the employee cafeteria at 9:30 am for a presentation about this new program and what we all will do to be a part of it. Refreshments will be served. I look forward to seeing you all there, and working with you towards a successful recycling program.

A. Boss”

Educational sessions - The memo should be supplemented by brief presentations to all employees. The “dos and don’ts” of the program and its benefits should be explained and questions answered. (Stickers with lists of what goes into each bin, or color coordinated bins may be available from your recycler and are helpful informational tools.) Information on your recycling program should be included as part of the orientation of new employees.



Posters - They should be placed at recycling collection points. They should be highly visible and eye-catching. Flyers may also be a good idea. Leave flyers in common areas like a break-room, by a water cooler/coffee pot, or in the rest rooms.

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Reinforcement and Follow-up:

It is important to reinforce new recycling habits. Keep employees informed of your company’s recycling efforts and successes. Note new recycled products that are purchased, participation rates, quantities of recyclables that are collected, revenue earned, disposal cost savings, and any problems encountered and/or solved in company memos or newsletters. Ask employees for suggestions as to how they think the program can be improved upon.



A successful program requires time and effort to familiarize the employees and the custodial staff with the recycling program's objectives and requirements.

WHAT HAPPENS TO THE PAPER WHEN IT LEAVES YOUR OFFICE?

At the recycling plant the paper is de-fibered by mixing it with water and applying heat to form a pulp mixture. By forcing the pulp through a series of screens, contaminants such as paper clips and staples are removed. The pulp is further cleaned by centrifugal cleaners and water washers before being spread over rotating screens to form new paper.



WHAT HAPPENS TO ALUMINUM AND GLASS?

Aluminum – Recycled aluminum is first crushed and then melted into a liquid aluminum form. This liquid aluminum is smelted with virgin aluminum before being re-rolled into a final product to be used in the aluminum can industry.

Glass – Recycled glass bottles and jars are processed by first crushing them into small glass pieces (cullet). Then, the cullet is mixed with sand, soda ash, and limestone to produce new glass bottles, jars, and other containers.

Aluminum and glass manufacturing plants have found that by increasing the percentage of recycled material in their manufacturing processes, they can save on



maintenance and energy costs. The awareness of this increased production efficiency has increased the demand for these post-consumer materials. As a result, not only will the recycling of aluminum and glass be more economical for the manufacturers, but it will also reduce disposable costs for the recycler.



WHAT HAPPENS TO CARDBOARD?

At the paper recycling plant, water and heat are applied to form paper fiber. These fibers are then further processed to produce such items as fiberboard, shoe boxes, and new corrugated paper.

RECORD KEEPING:

It is your responsibility to keep records on the amount of materials being recycled by your business. Each business is required to provide a report yearly to their local municipal recycling coordinator. You must have proper documentation in order to report to your municipality that your business is in compliance with the source separation requirements of the local recycling ordinance. Also, you want to ensure that your municipality can be credited with the correct tonnage of recyclable materials being recovered. These tonnage figures are required by the state to determine whether the mandated recovery goals are being met by the municipality.



In addition, the municipality in which your business is located is eligible for tonnage grant payments from the State of NJ, as well as from the Bergen County Utilities Authority for materials recycled within its boundaries. A record of how much material your business



recycled is needed for the municipality to be eligible for these grant programs.



Made from recycled materials



Capable of being recycled

OTHER MATERIALS GENERATED BY BUSINESSES:

There are many other materials which businesses generate which can be recycled: Plastic polystyrene “peanuts” used for packaging are not recyclable but can be reused many times. Store them year-round in a dry plastic bag and use them when packing or shipping. Some are now made of a vegetable derivative and closely resemble their plastic counterparts. If they disintegrate in water, they are made from vegetable matter.

Consider packing up your peanuts and dropping them off at your local packaging store. Most chain stores, such as Mail Boxes Etc. and the UPS Store will accept them. Check the phone book for more stores which will take them in if you do not wish to keep them.

Plastic:

A raised number (1 through 7) in a triangle on the bottom of most plastic containers tells you what type of plastic it is.

Sort plastic by number. Recyclable plastic often must be separated by number in order to avoid contamination as it begins the recycling process.

Recycle type 1 (PETE) and type 2 (HDPE) plastic containers – they often include some detergent containers, milk, soda, juice, cooking oil, and water bottles.



PS



Check with your recycling market for other plastic recycling specifications.

FACTS:

Plastic type 1 (PETE) can be recycled into items like carpet, auto parts, paint brushes, and industrial paints.

Plastic type 2 (HDPE) is recycled into products like detergent and engine oil bottles, trash cans and recycling bins.

Computers and Electronics:

Electronics contain metals, plastic, and toxins that should be reclaimed rather than put into a landfill.

Some can be refurbished or sold through charitable thrift stores.

Some parts will be removed and reused. The rest will be broken down into each component (black plastic, white plastic, copper, glass, leaded glass, wire circuit boards for precious metals) and recycled.



The Bergen County Utilities Authority has a permanent facility where old computers and electronics can be recycled by businesses for a small fee. Please call (201) 807-5825 for an appointment.

Laser and Ink Jet Printer Cartridges:

One third of businesses nationwide use remanufactured cartridges. Recycling your laser and ink jet printer cartridges will reduce the amount of plastic put into landfills. Most cartridges can be recycled up to six times and are guaranteed by most manufacturers to work as well as brand-new ones.



What does “remanufactured” actually mean?

The definition of remanufactured can vary from company to company. Unless a cartridge’s component parts are replaced with new after market components, it’s not considered to be remanufactured. A typical process involves inspection and replacement of key components such as the OPC (Organic Photoconductor Drum –more commonly know as the blue or green metallic cylinder in the cartridge). In addition, components such as the corona wire assembly, wiper blade, PCR (Primary Charge Roller), and magnetic roller all require replacement as needed.



One of the most critical parts of a cartridge is the OPC drum. Remanufacturers should replace the original OPC drum in all cartridges with a new after market drum. New after market drums are made specifically for remanufacturers, to have a harder and more durable surface than the OEM. The advantage is consistent sharp, clearer output. Due to various printer engines and their relative cartridge types, different drums are used. Remanufacturers have conducted extensive testing and research to ensure optimum performance from each type of drum.¹

Look at the instruction in the box of your new laser or ink jet cartridge to find out how to recycle your old one. Many companies will provide instructions, packaging materials and free postage if you wish to recycle your old cartridge, which is then refilled and used again.

Go to www.bcua.org for the latest recycling markets available.



WHAT HAPPENS NEXT?

The type of recycling approach which is best suited for your business needs depends upon the type of business you have and the circumstances in which you conduct it. This handbook aims to give you a basic understanding of New Jersey's mandatory recycling law and what must be considered when organizing and implementing a commercial recycling effort.

The specific details of making recycling succeed in your business must now be worked out between you and your municipal recycling coordinator. The recycling coordinator can provide you with information regarding recycling markets, storage containers, processing equipment, collection services and recycling associations. The Bergen County Utilities Authority staff is available to assist you and you can also get some valuable information from their website, www.bcu.org or by calling the BCUA Environmental Programs Hotline at 201-807-5825.

The Bergen County Utilities Authority greatly appreciates your assistance in helping to ensure the successful implementation of municipal recycling programs in and around Bergen County.

(Footnotes)

¹ "Frequently Asked Questions About Remanufactured Toner Cartridges," 1999 - Lasertone Corp.
June 1, 2004.



*The information provided in this brochure has been
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**The Bergen County Utilities Authority
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