Common industrial wastes with established recycling markets include: cardboard, pallets, metals, textiles, plastics, organic waste, lubricants, electronics, mixed office paper, and furniture. Many recycling service options for these materials are available in the Mecklenburg County vicinity. Recycling outlets are listed below. Check the vendor recycling lists at http://www.co.mecklenburg.nc.us/coeng and Recycling Market Directory at http://www.p2pays.org for further information.

RECYCLING

Cardboard and Mixed Office Paper:
- Weyerhaeuser
  704-398-6875
- Carolina Paper Board Corp.
  704-376-7474
- Paper Stock Dealers
  704-525-8728

Plastics:
- National Database of Post-Consumer Plastic Handlers
- American Plastics Council
  1-800-243-5790
- Custom Polymers
  704-332-6070
- Polymers
  704-843-7659
- Harmony Industries
  336-886-7225

Organic Waste:
- Environmental Recycling Alternatives, Inc.
  336-869-8785
- McGill Environmental Systems
  910-532-2539
- Smith Farms
  919-736-4336

Furniture:
- Salvation Army
  704-522-4970
- Local Used Furniture Outlets
  (see Yellow Pages)

Recycling Tip
To maximize convenience:
- Locate containers near areas where recyclables are generated – such as specific production lines, maintenance, receiving dock, packaging areas, and offices
- Integrate the separation and collection of recyclables into normal work procedures
- Sort recyclables the first time they are handled (for example, collect cardboard boxes for recycling as they are unpacked)

Waste Reduction and Recycling Factsheet

Industry wastes are byproducts, unnecessary purchases, obsolete processes, lack of equipment maintenance, unnecessary or excessive packaging, and poor housekeeping practices. These wastes could be viewed as potential resources rather than something to be discarded during the production process. This factsheet presents the steps to develop a waste reduction program tailored to the needs of industry. It also includes generic waste reduction tips, information on conducting a waste audit, and resources for recycling common industrial waste streams.

WHY WASTE REDUCTION IS GOOD FOR INDUSTRY

Positive Public Image - The public appreciates and patronizes businesses that make efforts to reduce waste.

Free Publicity - Join Mecklenburg County Waste Reduction’s Wipe Out Waste Business Recognition Program and receive free publicity in local media.

Cost Savings - Reduced operating costs by using fewer raw materials; reduced cost for compliance with waste regulations; reduced need for pollution control equipment and monitoring; reduced waste transportation, storage, and disposal costs; and generated revenues from the recovery and sale of reusable wastes.

HOW TO REDUCE, REUSE, AND RECYCLE WASTE

Check the boxes that apply to your company.

Production
- Modify equipment to improve efficiency
- Optimize raw material feeds and process to reduce waste generation
- Reclaim waste and by-products within the process (closed-loop recycling)
- Modify product to eliminate processes that create wastes
- Conduct waste audits to determine what can be reduced, reused, or recycled
- Educate employees on waste reduction techniques and any process changes

Packaging, Shipping, and Receiving
- Eliminate unnecessary or excessive packaging
- Reduce packaging materials: decrease weight of packaging materials, decrease size of packages, standardize box sizes

Resources

Environmental Protection Agency
http://www.epa.gov/p2

Mecklenburg County Waste Reduction
700 N. Tryon St.
Charlotte, NC 28202
704-336-3777 or 704-336-6087
http://www.co.mecklenburg.nc.us/coeng

Printed on Recycled Paper
Make double-sided copies whenever possible.

Receive faxes through computers and select which ones.

Produce documents in-house rather than using a printer.

Practice preventive maintenance on equipment to prolong the service life.

Reduce use of disposable items where possible.

Sell or donate used equipment and furniture.

Reduce use of disposable items where possible.

Collect recyclable material such as mixed office paper, corrugated cardboard, aluminum cans, and toner cartridges.

Reduce use of disposable items where possible.

 Convert scrap paper, outdated forms, and letterhead into memo pads.

Print copies on both sides of the paper and use second side of the paper that contains only one side of writing.

Use just-in-time ordering to eliminate inventory by moving raw materials from the receiving dock to the production area for immediate use.

Find uses or markets for off-specification material that would otherwise be disposed (contact Southeast Waste Exchange at 704-547-2270).

Purchase material in appropriate-sized containers; for example, if used in bulk, buy in bulk, if used by the can, buy by the can.

Ask suppliers to take back unwanted packaging and pallets; and use returnable or reusable boxes or crates.

Store inventory under appropriate conditions and temperatures to maintain shelf life.

Arrange storage so materials can be easily accessed and handled to prevent spills and breakage.

Purchase more efficient and durable equipment.

Purchase multi-purpose and concentrated products such as cleaning supplies.

Purchase nontoxic or less toxic materials when possible.

Purchase paper products (stationery, towels, tissues) made from post-consumer recycled paper fibers.

Purchase recycled-content solid waste containers, liners, and storage bins.

When renovating, purchase building materials made from recycled-content, such as ceiling tiles, carpet, floor tiles, and wallboard.

Purchase supplies with minimal packaging or reusable packaging.

Housekeeping/Maintenance

Practice preventive maintenance on equipment to prolong the service life.

Reuse plastic drums and buckets as recycling or solid waste collection containers.

Use refillable pump-style sprays instead of aerosol cans.

Practice good housekeeping to help control material losses.

Offices

Use e-mail and maintain electronic files instead of paper files.

Establish a company website instead of printing brochures.

Produce documents in-house rather than using a printer to avoid extra copies.

Edit documents on-screen before printing.

Receive faxes through computers and select which ones to print.

Make double-sided copies whenever possible.

Eliminate unnecessary reports.

Participate in a commercial mail reduction program (contact Mecklenburg County Waste Reduction for information).

Reuse office supplies, such as file folders and manila envelopes when possible.

Conduct a facility walk-through to verify the information previously collected, to collect additional information, and to actually observe the processes and associated waste streams.

Review the information collected during the preliminary investigation and facility walk-through and any other pertinent information to identify waste reduction opportunities and priorities.

Document your findings.

3. Choose waste reduction techniques. Preference should be given to reducing waste at its source over recycling the waste once it is generated. Waste reduction techniques should be evaluated by the Waste Reduction Coordinator and Team. The evaluation should take into consideration the unique conditions of your company, financial and human resources, health and safety issues, production priorities, greatest or most problematic waste management issues, ease of implementation, convenience to employees, and cost-effectiveness. The evaluations can then be used to decide on the best methods to reduce wastes in your company.

The Waste Reduction Hierarchy lists waste management options in order of preference.

Source Reduction

Recycling

Reuse

Composting

Incineration

Landfill

1. Commit to waste reduction. Commitment to waste reduction begins by getting top management approval. Demonstrate commitment with time, resources, and personnel. Select a Waste Reduction Coordinator who is enthusiastic and has good communication and organization skills. The Waste Reduction Coordinator can make or break the program. A Waste Reduction Team composed of representatives from across the company will also be needed. For example, the team could have representatives from production, shipping, purchasing, maintenance, engineering, sales, and management. The team would conduct a waste audit and identify, evaluate, and implement waste reduction opportunities.

2. Know your waste. Determine the types and amount of waste being generated and identify the process that creates them by conducting a waste audit (contact Mecklenburg County Waste Reduction for technical assistance).

3. Determine waste reduction goals and a timeline.

4. Develop a waste reduction strategy and identify recycling outlets. Involve employees in developing the waste reduction program, seeking their ideas for waste reduction and recycling collection and storage. Start with a few techniques and expand the program over time. If recycling, contact several recycling outlets and negotiate for services and prices or revenues. Set up transportation for the recyclables once they are collected. Arrange for segregation of recyclable materials on the factory floor, in receiving, shipping, in the warehouse, etc. using containers or areas. Train employees and conduct trial runs to identify and resolve any problems.

5. Involve/train/motivate staff. Involve all employees in waste reduction. Include multilingual waste reduction and recycling procedures in new employee orientation and training. Include ongoing waste reduction training in staff meetings. Where you can, supply incentives that will keep employees interested and motivated. Part of the money saved by reducing waste could be donated to a charity of the employees’ choice or go toward a company picnic. Existing employee service awards could incorporate waste reduction practices as a criterion.

Tip: Incorporate waste reduction responsibilities into employee job descriptions.

6. Monitor and evaluate. The waste reduction program should be reviewed periodically and achievements measured against established goals. Monitor waste and recycling containers to determine what people are continuing to discard. Review participation in waste reduction techniques. If you experience low participation rates or if contaminants are frequently found in the recyclables, review your training and promotion programs and solicit feedback from employees. Review educational materials and distribute these as needed.

If possible, record the amount of recyclables recovered from the waste stream and use this to calculate cost savings, revenue, and program efficiency. Also, review purchase orders to identify opportunities to reduce supplies and purchase bulk/concentrate materials wherever possible. Publicize efforts and achievements to top management and employees.

Waste Audit Steps

- Perform preliminary investigation to identify the types and quantities of wastes and their generating processes; use operating logs, shipping papers, waste manifests, etc.
- Conduct a facility walk-through to verify the information previously collected, to collect additional information, and to actually observe the processes and associated waste streams.
- Review the information collected during the preliminary investigation and facility walk-through and any other pertinent information to identify waste reduction opportunities and priorities.
- Document your findings.

Recycling Opportunities at Mecklenburg County Industries

Example 1 – A large company generates 54 tons of cardboard, 10,800 pallets (297 tons), and 24 tons of newsprint annually. Diverting this 375 tons of waste from the landfill would save $14,625 in disposal fees and, in turn, generate more than $16,200 in revenue.

Example 2 – A large company generates 456 tons of food waste annually. This waste stream has the potential to be recycled through outlets in the Mecklenburg County area. Recycling the waste, rather than disposing of it, would save $17,400 in waste disposal fees annually.

Example 3 – A large company reuses pallets, but discards its damaged pallets. About 400 pallets are discarded annually, costing about $1,300 for disposal and transportation. Pallet recyclers would accept these damaged pallets for $350 which includes transportation, resulting in a savings of $950.

Other Potential Recycling Program Costs:

- Employee training and materials
- Program monitoring and recordkeeping
- Recycling containers
- Transportation of recyclables