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# WMU RECYCLES

October 1997

A Publication of WMU Recycling Services

## The First of the 3 R's

There is a hierarchy of management techniques for handling solid waste. This hierarchy is reduction, reuse, recycling, composting, incineration and finally landfilling. Unfortunately, landfilling is the most common technique.

Reduction is at the top of the hierarchy because it is the most efficient and cost effective method of handling waste. Since waste is not created in the first place, time, money and resources are not consumed in management.

There are numerous things we can do to reduce our waste. Since paper is far and away the largest volume of waste, it makes sense to reduce it first. Only print what is necessary. Does everyone on the routing sheet really need that report? Can it be submitted on computer disk rather than printed? Can it be single spaced and double side copied?

Other things you can do include using rechargeable batteries, canceling unwanted subscriptions, using smaller quantities, taking smaller portions, buying in bulk (especially non-perishable items), and using a less hazardous material. These are just a few suggestions. There are other possibilities throughout this newsletter.

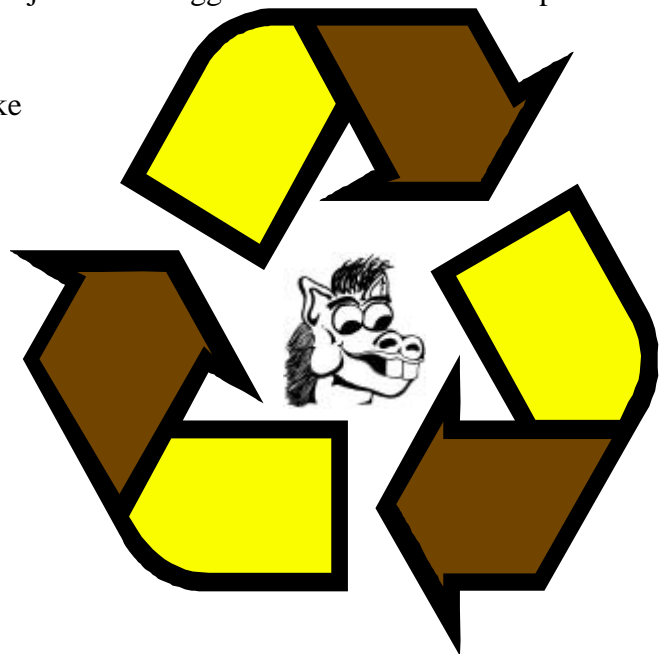
If you have suggestions for articles, would like to submit an article, or you have a question that needs to be answered, please send it by campus mail to:

Carolyn Noack  
Recycling Services  
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Or you can send messages via e-mail:

[carolyn.noack@wmich.edu](mailto:carolyn.noack@wmich.edu)

Remember...Remember to Reduce to save time and money.



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## Waste Reduction Techniques

For paper products:

- Make double sided copies, whenever possible
- Reuse envelopes for casual correspondence
- Recirculate memos or use electronic mail
- Make scratch pads from used paper
- Redesign forms to fit on a smaller page
- Use narrow-ruled notebooks
- Start reading magazines and newspapers on-line



Other Products:

- Use durable towels, napkins, dishes, glasses, and cups
- Buy a reusable coffee filter
- Save paper and plastic bags for trash can liners
- Buy frequently used, non-perishable items in bulk or concentrate
- Purchase items with minimal packaging
- Use compact fluorescent light bulbs
- Take your own shopping bags to the store
- Donate unwanted items to local social service organizations
- Rent infrequently used items

### Recycling Reminders...

Please flatten all cardboard boxes.

Please do not put books and magazines in the large paper recycling bins. (If you can't lift them, neither can we.)

Please do not bring recycling material from home.



### Did You Know...

University departments purchased nearly 30 million sheets of paper from University Stores during the last fiscal year?

Each one of us receives 1.5 trees worth of junk mail each year.

\$1 of every \$10 we spend on food pays for the packaging.

Every recycled can saves the equivalent of 6 ounces of gas.

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## ISN'T #2 PLASTIC, #2 PLASTIC?

Things that on the surface seem simple and straightforward, turn out to be quite complex upon closer examination. This is true about plastics. One good thing that recycling has done for educating consumers is that many people have finally become aware that “plastic isn’t plastic.” In fact, there are literally thousands of individual resin grades and luckily you don’t have to worry about 99.9% of them. The customer of a plastic item sees it as hard or soft, transparent or opaque, with some given color. What is truly transparent to the consumer is that plastic materials are very different when they are processed.

So, some simple words on processing. As one of my students once said, “Well Dr. Engelmann, isn’t it really a matter of heat and squirt, smash, suck, or blow?” Grudgingly I suppose, that although this description lacks technical refinement, it does describe about 90% of plastics processing. Most plastics must be brought to a molten state and have pressure applied to cause them to form. This may be in the form of injection (squirting), compression (smashing), vacuum (sucking), or inflation (blowing). This is the point where we get into trouble with Number 2 plastic. Number 2 plastic is high density polyethylene. It may either be injection molded to form a product such as a food storage container, or it may be blow molded, resulting in a milk jug or oil bottle. These items are all containers and, theoretically, all of them are recyclable. However, to injection mold something, the resin in its molten state must flow like honey. To be blow molded, the resin in its molten state is more like salt water taffy. You can imagine what would happen if honey and salt water taffy were mixed. Therefore, mixing high density polyethylene designed for injection molding with high density polyethylene designed for blow molding produces a mixture that is not well suited for either process.

This is very similar to the concerns with recycling glass. A very small amount of window glass mixed in with a large amount of bottle glass can render the bottle glass too weak for blowing new bottles.

So, how can consumers (you) tell the difference between a blow molding grade of polyethylene and an injection molding grade of polyethylene. Eighty-five percent of it is fairly simple. If the empty plastic container has a neck on it, such as detergent bottle or a milk jug, by default it must have been blow molded. However, if the Number 2 container has no neck on it, such as margarine tub or a 5-gallon bucket, then the product was most likely injection molded. Furthermore, items that do not class as a container, for instance some small fixture used to ship your new computer or a piece off your automobile, are almost certainly injection molded. These injection molded pieces need to enter a different recycling stream than the blow molded containers do. Improving the quality of recycled blow molded resins today should lead to additional recycling avenues in the future.

Submitted by

Dr. Paul Engelmann, Department of Engineering Technology

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## Yellow Bin Delivery Update

Recycling Services has been delivering yellow recycling bins for approximately one year now. Many areas have already received both the large central collection bins and the small desk side bins while others have not received either. This is a slow process that is driven by funding and student availability.

Please be assured that all areas will receive bins. If you do not have any recycling bins by December 1, 1997 or if you still have blue recycling bins or small cardboard boxes by February 1, 1998, please contact Recycling Services. We will make every effort to provide or replace them as soon as possible.

Thank you for your patience during this transition.

Please visit on the Web at <http://www.physicalplant.wmich.edu>. Then press "Information".

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