

ENACT Ecology Reports

Environmental Action for Survival



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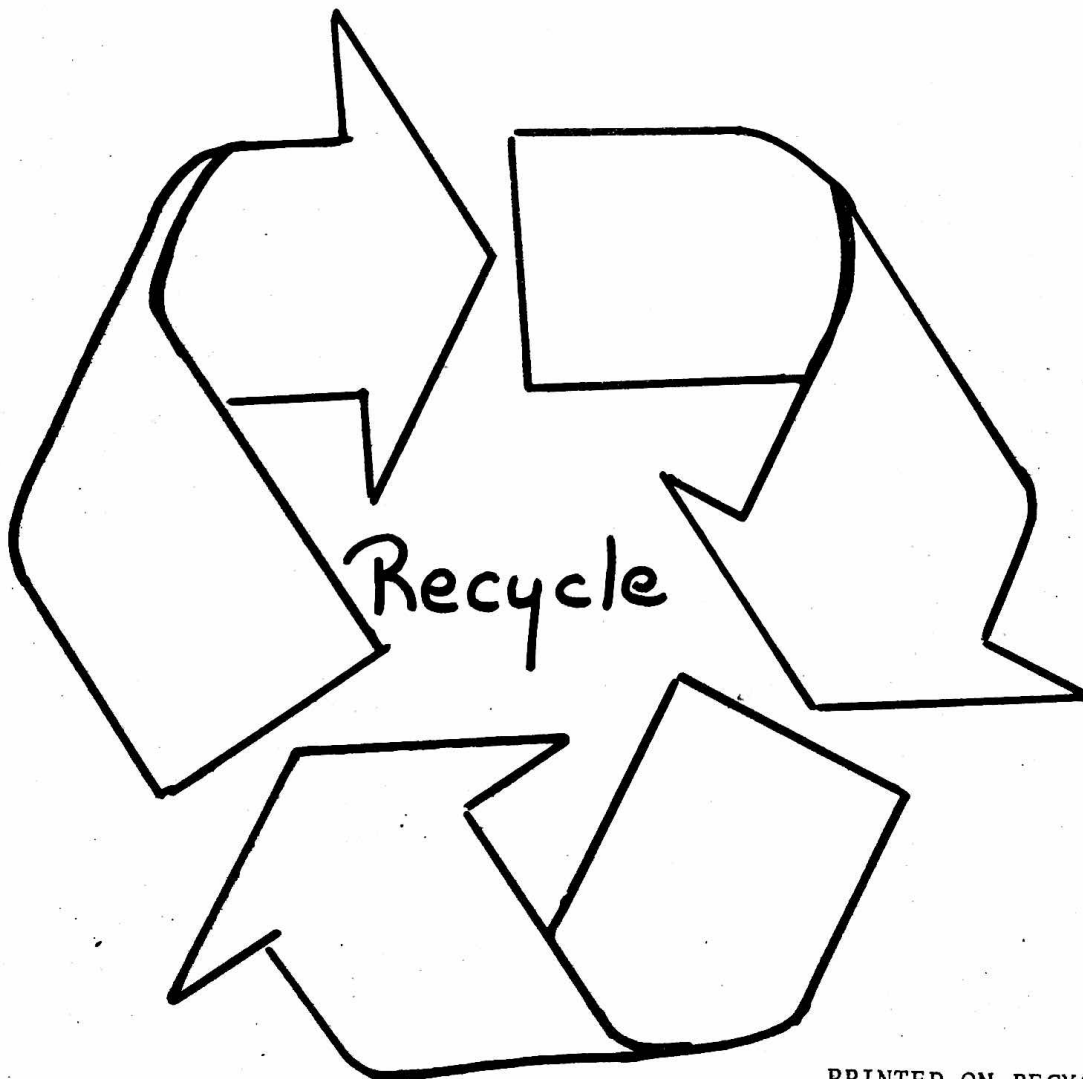
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We are not consumers, but rather users and wasters. Every year we discard about 270 million tons of trash: paper, cans, bottles and all of the other assorted signs of our affluent society. This means that each individual is contributing approximately six pounds of trash per day. On the average, each individual contributes yearly:

- 188 lbs. of paper
- 135 bottles and jars
- 250 metal cans
- 338 caps and crowns

Every year we spend about \$4.5 billion to get rid of all of this trash, much of which could be recycled. The sanitary landfill operation, such as we have here in Ann Arbor, is one means of waste disposal. Other methods are open dumps, incineration, open burning, ocean dumping and composting. Open dumps remain the primary means of disposal. (77% of all collected waste is disposed of in open dumps.) The cost this fiscal year to maintain the city's collection of garbage and to operate the sanitary landfill, which is projected to be filled by 1985, will be approximately \$1,014,000.

We must look at what we generate that ends up being thrown away at such a high cost. Convenience packaging at supermarkets, non-returnable bottles, the advent of canned beer and soda, increased industrial output, all present solid waste disposal problems unimaginable even ten or fifteen years ago. One of the means of reducing the mounting piles of solid waste and reusing our limited supply of natural resources is recycling. Recycling is the collection and utilization of scrap and waste materials that have served their original purpose. The idea is not a new one. During World War II, recycling was prevalent in the United States on a large scale, and various scrap dealers have been in the business

for many years prior to the recent advent of recycling stations throughout the country. What is happening now is a return to the concept of consumer activism and responsibility on a massive scale.

Recycling in Ann Arbor

The Ecology Center-sponsored solid waste recycling project in Ann Arbor had its beginnings in collection centers located in the homes of local citizens. In June 1970, a two-day glass recycling drive was held at the Arborland Shopping Center. This drive, jointly sponsored by the Ecology Center and the Owens-Illinois Glass Co., collected over 68 tons of glass from over 30,000 people.

The response to this drive prompted the establishment of a permanent glass recycling station on Felch St. in September 1970. This station was financially supported by Owens-Illinois (rent, transportation, glass equipment, office supplies, salaries) and manually supported by the Ecology Center (labor and information). This station collected almost two million pounds of glass in nine months.

During May 1971, the recycling station relocated in the Arborland Shopping Center for a six month trial period, on land donated by the Arborland Merchants Association. The Felch St. Station was closed permanently, and the Ecology Center assumed full responsibility for operating the new station with financial assistance from Owens-Illinois, the Ann Arbor City Council and the Downtown Kiwanis Club. This station operated through November 1971, collecting over one million pounds of glass.

Paper recycling began in December 1970, with regular pick-ups of computer paper and cards from various computer installations in the area. In July 1971, paper recycling was extended to include newsprint which was collected on Saturdays at the Westgate Shopping Center. At the end of July, this same station began collecting metal cans. Through September, 1971 this station had collected over 100,000 pounds of newsprint and 20,000 pounds of cans.

New Recycling Station

On December 21, 1971 a recycling station combining the collection of newspaper, magazines, glass and cans was opened on South Industrial Highway on land generously donated rent-free by the Coca-Cola Bottling Co. of Ann Arbor. (The Arborland and Westgate operations were terminated in November 1971.) The volume at the new station indicates nearly a doubling in participation due primarily to the convenience of the new location, new hours allowing us to be open on Saturdays, and a publicity campaign urging citizens to recycle all materials at one location.

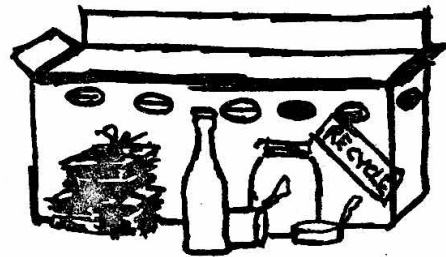
Curb-Side Pick-Up

Recycling stations have been a tremendous success in Ann Arbor. However, they have not been able to reach all of the citizens on a regular basis and thus make a significant impact on the amount of materials going to the landfill and most importantly, relieve the burden we are constantly putting on our supply of natural resources.

Because of this, a project of weekly curb-side pickups of glass, newspapers and cans was held in two neighborhoods during July and August in conjunction with the City of Ann Arbor and the Neighborhood Youth Corps. The results from this project were overwhelming. In one area, 94% of the households participated at least once. In the other 81% participated at least once.

During the project a total of 24,900 lbs. of solid waste were collected for recycling. At the conclusion of the project a survey was conducted to determine people's attitudes toward curb-side pick ups, whether they would like to see it continued, and other information that would be helpful in instituting a city-wide program of pick ups sponsored either by the City or by a private entity.

A report of the results of the project was presented to the Ann Arbor City Council in November. A working committee of city and Ecology Center representatives was formed to report on exactly how and when the City could take over recycling operations. Copies of that report are available at the Ecology Center. Ideas people have on how they would like to see such a program operate are very welcome.



The following are brief descriptions of steps being taken in various areas of recycling and where materials collected at the Ann Arbor recycling station are taken for recycling:

GLASS

The largest market for salvaged glass is the bottle making industry. The glass companies estimate that they use up to 30% crushed glass or cullet in making new glass containers. Glass is also being tested as a building material; waste glass is being used as an aggregate in building roads. Currently, "glasphalt, asphalt with up to 90% crushed glass, is being field tested by the University of Missouri. While there are 96

collection centers in the country, The Environmental Action Bulletin states that only 2 or 3% of the 36 billion glass containers produced in 1970 were returned to collection centers.

Glass collected in Ann Arbor is sold at \$20/ton to the Owens-Illinois Glass Co. in Charlotte, Michigan, the only glass plant in the state. They use approximately 15% cullet in the production of new glass.

CANS

Aluminum has a high recovery value--\$220 a ton and can be melted down and reused over and over again. Currently 20% of the world's aluminum is recycled. In Ann Arbor, because of marketing patterns, very little aluminum-packaged containers are sold as compared with the situation on the East and West coasts. Because of this, the Ann Arbor recycling operations sell mixed cans to the National Can Co., Livonia, Michigan at \$20/ton. Cans are then sold as scrap metal to be remade either into new cans or for use in the refining of copper.

NEWSPAPERS AND MAGAZINES

Presently roughly 20% of the paper stock produced each year is reclaimed. It has been estimated that the recycling of one ton of paper saves 17 trees. If 50% of the paper used could be reclaimed, we would be saving about 500,000,000 trees.

Newspaper is sold to paper mills and reused to make newsprint. The Ann Arbor News is printed on recycled newsprint which comes from the FSC Paper Co., Chicago, Ill. The Pioneer Paper Co., Detroit, Mich. who buys newsprint recycled in Ann Arbor at \$11/ton, sells paper to the FSC Paper Co., thus we have a complete chain of reuse.

Magazines are sold for use in the manufacture of various products such as roofing materials. Computer paper and cards are also recycled and used in the production of memo, bond, ditto and cover stock paper.

PLASTICS

Scrap ends of plastics, as a general practice, are recycled at the plant site. Mixed plastics from the solid waste stream do not yet appear to be truly subject to recycling, except possibly on a very limited basis.

PLASTIC COATED MILK CARTONS

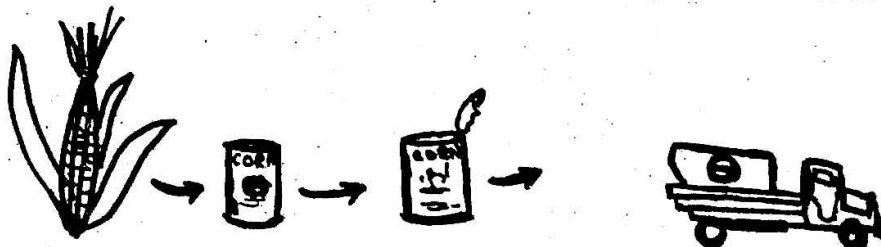
A market with the Riverside Paper Co., Appleton, Wis. has been found for milk cartons. They use the wax off of the carton to operate their mill and use the paper in the production of various papers.

In the future milk cartons will be accepted for recycling at the Ecology Center Recycling Station.

Non-Returnable Containers

Banning the non-returnable beverage container must go hand-in-hand with programs of recycling. Presently there is a bill in the Committee on Consumers and Agriculture of the Michigan House of Representatives (HB 4685) which would require a 10¢ deposit on all beverage containers of 20 oz. or less volume, whether glass, metal or plastic. Letters addressed to the committee or state representatives supporting the bill and requesting that it be brought out of committee will help to promote the returnable on a state wide basis.

Locally, the Ecology Center will be working on passage of a similar ordinance. Anyone interested in working on this should contact the Ecology Center.



Returnable vs Non-Returnable

Presented below are statistics on the costs involved in the returnable vs the non-returnable container to the consumer in two cities. The chart was prepared by the Citizens for a Cleaner Environment.

Soft Drinks

	(1)	(2)
12 oz.cans-non-ret.	6/89¢	6/83¢
12 oz.bot.-return.	6/69¢	6/59¢
Savings per carton	20¢	24¢
Savings per drink	3¢	4¢
Extra cost/can	29%	40%

Beer

12 oz cans non-return.	24/\$4.93	6/83¢
12 oz bottles returnable	24/\$3.14	6/.95
Savings/case or carton	\$1.79/case	30¢/carton
Savings/drink	7.4¢	5¢
Extra cost for can	57%	31%

No-Deposit Litter

- (1) Washington, D.C.
(2) Richmond, VA

It has been stated by people in industry that litter created by cans and bottles along the highway would not be substantially reduced by legislating a deposit on the returnable container. It is their contention that we live by a throw-away philosophy, inculcated incidentally by industry, and that a deposit on a bottle would not be sufficient incentive for people to throw-away fewer bottles along streets and highways and instead return them to retrieve their deposits.

The Ecology Center-sponsored clean-up of the Huron River on November 21 throws a different light on the subject. More than the majority of the litter picked up was of the no-deposit no-return variety. Very few returnable bottles were found in the heaps of bottles and cans picked up. This may reflect the smaller volume of returnable bottles sold in the area, but it also reflects an attitude of those buying the returnables. Not only would we be saving on valuable resources, money, and the amount of materials going to the landfill, but we may also be able to reduce the amount of litter that we find as we drive or walk anywhere today.

Market Needed

While the technology for separating trash into paper, metal and glass now exists, the economic system does not favor recycled goods. Recycling of materials is only of value if we have insured that there will be outlets for goods collected. Some of the changes which might be made are:

1. We must develop a market outlet for the recycled materials. This may mean insisting that our products contain maximum quantities of recycled materials. One of the areas where this is especially possible is paper products. Bond, mimeo, duplicator, stationery, envelopes, cover stock and newsprint are available containing percentages of recycled materials.

The cities of Boston and New York have passed legislation requiring that all paper purchased by the city contain a minimum of 25% recycled fibers. Laws such as these insure an outlet for paper mills and provide an incentive for switching over to recycled paper production. The use of recycled paper can be promoted by identification such as: "printed on recycled paper", "this is 100% recycled paper", etc.

2. The present discrimination against recycled materials must be eliminated. People think that these products are not as good as primary materials. Consumers must be educated towards purchasing recycled materials.

3. The ICC freight rates should be equalized so that raw materials will not be transported interstate at rates which are cheaper than for scrap materials. This economic discrimination memely promotes the continued depletion of our natural resources.

Amount of Waste Increasing

In the future, with the amount of solid waste being generated increasing at phenomenal rates not only in the residential sector, but in the industrial and agricultural sectors as well, we must look for more comprehensive ways of dealing with the problem of solid waste disposal.

Smaller communities, many presently using open dumps for trash disposal, could group together and thereby provide a coordinated approach to solid waste disposal problems.

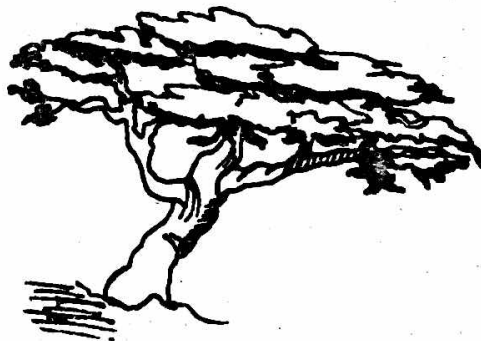
An integrated systems, on a regional basis, where all waste is brought to one central location, recyclable materials are reclaimed mechanically and separated, energy for running the operation comes from the materials being disposed of, and other materials are composted might be a solution.

Along with any program of recycling must be a serious examination of buying habits and life styles. Composting of garbage, abandoning electrically run appliances, walking, riding a bike, joining a carpool, riding a bus, using returnable beverage containers now available, are all part of living more intelligently and closer to nature now.

The Ecology Center Recycling programs all began because of the incentive of a group of people who came together with a desire to see some kind of recycling projects instituted. From that group a Recycling Committee was fomred which meets every other Thursday. The next meeting will be Jan. 24th at 7:30 at the Ecology Center.

Recycling in Ann Arbor would not be possible without the impetus of these people and the help of the volunteers who work at the station. Open Wed.-Sat. from 10:00am - 4:30pm, it is on South Industrial Highway, south of the Coca-Cola Bottling Co.

Hope to see you there.



"Of each dollar consumers spend on food grown on U.S. farms, nearly 9¢ goes to pay for wrappings which wind up in the trash can, not on the dinner table... A trend toward more ready-to-serve food packaging is expected to continue..."

(Journal & Courier, Oct. 22, 1971)

BIBLIOGRAPHY &

Sources of Further Information on Recycling

How to Set Up an Economically and Environmentally Sound
Recycling Station

Keep Dayton Beautiful Council-Dayton Jaycees
City Hall
Dayton, OH

an excellent description of how to establish
a recycling station- free

The Aluminum Association

750 Third Ave., N.Y. , N.Y. 10017

how to set up an aluminum reclamation center
plus other information

Carbonated Beverage Container Manufacturers Association

110 59th St., Room 1200, N.Y., N.Y. 10022

Concern, Inc.

2233 Wisconsin Ave., N.W.

Washington, D.C. 20007

recycling fact sheets available at cost
consumer group

Glass Containers Manufacturers Institute, Inc.

330 Madison Ave., N.Y., N.Y. 10017

clearinghouse for information on glass recycling

National Association of Secondary Material Industries

330 Madison Ave., N.Y., N.Y. 10017

clearinghouse for all industries using secondary materials;
lists of distributors and producers of recycled paper

In the near future, the Ecology Center will have compiled and
available to the public a series of fact sheets on recycling and
the history of solid waste disposal methods in the Ann Arbor area.
Copies will be available on request.

Special thanks to Pat Taylor,
Recycling Chairman for the Ann
Arbor Ecology Center, who pro-
vided information on recycling
for this issue.