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Recycling in Monroe County in 1974*

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Summary

Glass recycling was successful and profitable in Monroe County in 1974. An estimated 2,136 tons of glass were collected and sent to be reused. This is approximately 3½% of all the glass discarded in the County.

Recycling of paper is still possible but it does not earn enough money to defray the cost. One way to continue to recycle some paper is to let the cost of hauling be subsidized by the income from recycling glass. The market for paper is expected to rise again under federal stimulus to building, and salvagers realize that they may need to keep the supply of paper coming. A possible program for this is presented in this bulletin.

The entire recycling program in 1974 in Monroe County was a remarkable success in a year when recycling was beset by special economic difficulties. The recycling center at Pittsford is cited as an exemplary operation which illustrates that good management and support can succeed even in the highly unfavorable situation.

Background

It is estimated that in 1975 the residents of Monroe County will produce 730,000 tons of household wastes: 350,000 tons or 48% will be paper and 58,400 tons or 8% glass and ceramic (1). Most of this will be buried in landfills.

Since 1970 a determined group of county residents has tried to shift this awesome figure by carrying their sorted materials to recycling centers for sale and reuse. The success of any recycling operation depends on two variables - which are usually beyond the control of the recyclers - markets and haulers. If no one is willing to buy the material there is no point in collecting it, and haulers cannot profit from selling the material to the user.

In Monroe County recycling is a voluntary operation, so that centers open and close according to the ability of those who run them to dispose of materials. Table 1 is a summary of all the recycling centers open in the County in 1974 and of the materials they collected.

There were 41 recycling centers operating in 1971, 23 in 1974 and 15 are operating today** (Some towns operate 2; the City had 7 in 1974; but this bulletin counts 1 for each town in conformity to customary records.) There are no formal standards for running recycling centers and each center is as individual as each town. They vary in types of items collected, hours opened, and methods of recycling the collected materials. Some had kept no records, others had complete records. Some are managed by the town while others use private facilities. All represent great dedication on the part of those who organized them.

* Recycling Info staff. Recycling Info is a subsidiary of RCSI; it coordinates information about recycling centers and gives information to all who want it.

This Bulletin has also been published as a Recycling Info Bulletin, #RI-13.

** Ogden reopened its recycling center May 9, 1975

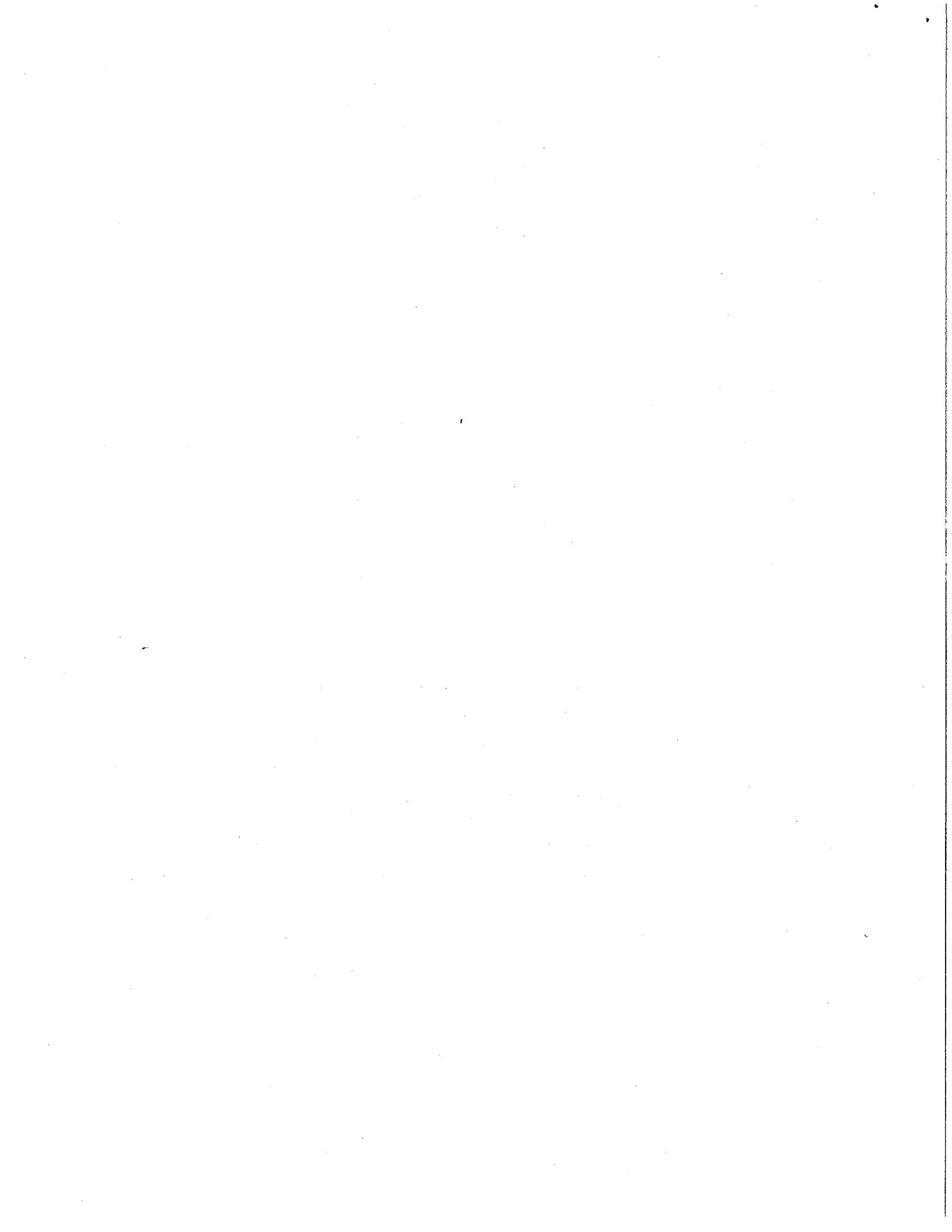


Table 1. Materials Collected at Recycling Centers in Monroe County in 1974

<u>Village, Town or City(no.sites)</u>	<u>Hauler Private/Town</u>	<u>Collects</u>	<u>Present Status</u>	<u>Yearly amount Collected in tons</u>
Brighton (1)	1	G,P,M	no Gr.	est. 144 G
Brockport(V)(2)	1	G		est. 20-30
Chili(T)(1)	1	G,M,P,Gr		est. 43 G; 226 M; 30 P
Churchville(V), also Riga (2)	2	G,M,P,card- board, metal appliances		gross income \$1,285.13; no break- down available
Clarkson(T)(1)	1	G,M		est. 60 M; 1½ G
East Rochester(V)(1)	1	G,N,cardboard		est. 78 G; 108 card.; 48 P
Gates(T)(1)	1	G,M	temporarily closed	est. 37.5 G; 18.7 M; 1000 lbs. P
Greece(T)(2)	1	G,M,P	no grease, temp- orarily no paper	no figure available
Hamlin(T)(1)	1	G		no information
Henrietta(T)(1)	1	G,M,P		est. 780; no breakdown
Hilton(V)(1)	1	G,M,P		actual 36 G; 75 P
Honeoye Falls(V)(2)	1	1	G,M,P,Gr	actual 31 G; est. 3 M; Scouts take paper
Irondequoit(T)(1)	1	G,M	no paper	no figure
Mendon(T)(1)	1	G,M	no information	no figure available
Penfield(T)(1)	1	G,M,P		no figure available
Perinton(T,V)(2)	1 1	G M	no paper temp.	actual 180G; 104 P
Pittsford(T,V)(1)	1	G,M,P,Gr	also cord wood, leaf compost + wood chips	actual 156.36 G; 131.7 P; 15 M(6 months) 21½ cords wood
Sweden(T)(1)		G,M	closed	no information
Rush(T)(1)	1	G,M,P		no information
Spencerport(V)(1)	1	G,M		no information
Webster(T)(1)	1	1	G,M,P,Gr	no information
Wheatland(T)(1)	1	G,M,P	closed	est.15-20 G; 7-9 P no figure, M
Rochester(C)(7)	1	G	3 have closed	270 G
Pepsi Cola	1	G,M		est. 104 G; no figure, M
Coca Cola	1	G,M		no figure
Richard W. Friday Inc.	1	G		no figure

Key: V = village C = city G = glass P = paper
 T = town M = metal Gr = grease

Note: American Can Co. has received a total of 287 tons of metal; see text.



Recycling Info maintains a current record of centers that are opened and materials collected. They receive between 50 and 100 calls a month from people looking for centers where they can dispose of their metals, paper and glass.

Glass

The recycling centers in 4 towns and the City have kept precise records of how much glass they recycled. Seven more town recycling centers and Pepsi Cola have estimated their glass turnover. These 13 centers recycled an estimated 1,157 tons of glass or an average of 89 tons/center. In addition there are 11 centers that have kept no records and were not willing to estimate. Assuming that they recycled the average 89 tons of glass each, they would have recycled 979 tons - making the total amount of glass recycled in the County 2,136 tons - or 3.5% of the glass discarded by County residents during the year.

Table 2. Estimate of Glass Collected by Monroe County Recycling Centers in 1974.

	<u>No. of centers</u>	<u>Tons of glass collected</u>	<u>Collected glass, as percent of glass discarded in County</u>
Centers that kept records	5	673.36	1.1%
Centers that estimated	<u>8</u>	<u>484</u>	<u>0.8%</u>
Total	13	1157	1.9%
Centers that collect glass but keep no records	11	979 ^(a)	1.6%
Estimate of total for Monroe County	24	2136	3.5%

(a) Assumes that each collected the average amount = 89 tons

In addition to this recycled glass, many people interested in reducing the amount of waste buy reusable soft drink and beer bottles when they can find them*, and return them to the stores for refilling. We do not have the data to estimate this number.

Glass Collection in Pittsford (3)

The Town of Pittsford has an active recycling center which keeps careful records (2). Pittsford has 3.6% of the population in the county (4) and collected 7.3% of the glass that was recycled in 1974. The center rents a dumpster truck for \$65 a month and keeps it at the recycling center all the time. The dumpster holds 10 tons of glass if the bottles are whole, and up to 13 tons if the glass is compressed. One truckload (or less) was collected per month for ten months out of the year so the truck makes approximately 1 trip per month to Owens-Illinois in Brockport. (Twenty tons were collected in January and 19.8 in May and the truck made 2 trips.) Hauling costs \$75 per trip. Rental and hauling together therefore totals \$140 a trip. Income from the glass is \$20 per ton, and in Pittsford in 1974 it varied between \$175 and \$263.80 per truck load. The average income per month was \$260.60 and the average cost \$148.12 so this recycling center earned \$112.48 a month in 1974 just from recycling glass (Table 3.).

* *Sources of Beverages in Returnable Bottles*, Recycling Info, March 1975 lists sources of soft drinks in reusable bottles.



Table 3. Glass Recycling in Pittsford

<u>Year</u>	<u>Tons of glass collected</u>	<u>% increase in tonnage over 1972</u>	<u>Rental and hauling charge</u>	<u>Income</u>	<u>Profit</u>
1972	115.4		\$1,550	\$2,308.10	\$758.10
1973	134.7	17%	1,805.00	2,686.70	861.70
1974	156.4	35.5%	1,777.50(a)	3,127.30	1,349.80

(a) Hauling charges were lower in 1974 than 1973 because the glass no longer has to be separated by color, and the Highway Department uses a payloader to smash the glass and compress it to allow the dumpster to hold more.

From Table 3 it is evident that the amount of glass being recycled is gradually increasing. In Pittsford, the increase is small, but it is positive in spite of the oft quoted claim that interest in matters ecological is dying down.

At present there is a good market in the County for glass. Owens-Illinois will buy all they can get as long as it is clean and there is no metal attached. They do not pay more for glass separated by color because they can now make an attractive green bottle from the mixed cullet. It is used primarily for wine bottles. They make colorless glass from raw materials. The president of Owens-Illinois has expressed his belief in recycling and intention to continue taking the material (5). As long as this is true, if people will bring enough glass to recycling centers it will be profitable to recycle and may even subsidize some less profitable recycling such as cans, or temporarily, paper.

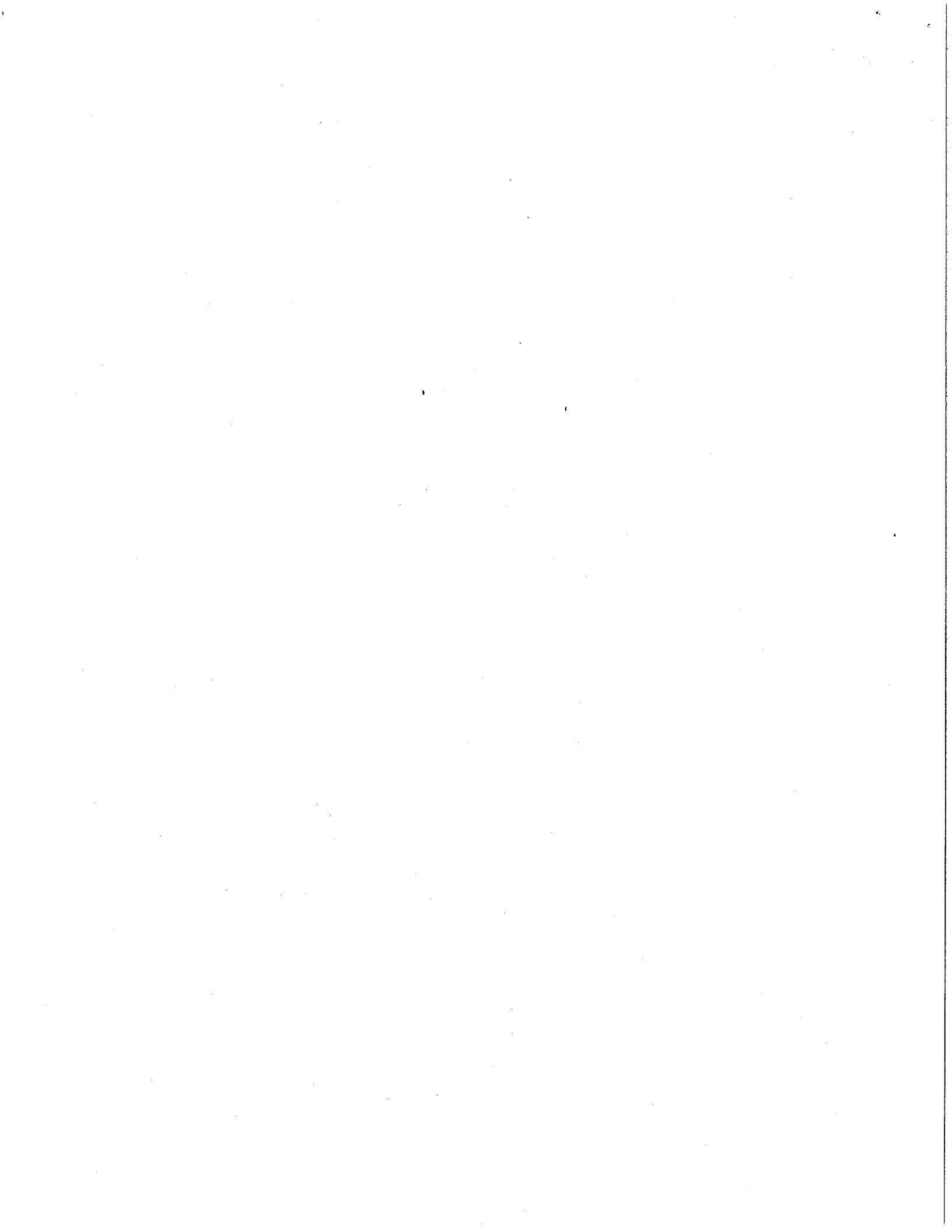
Metals

Housewives are more reluctant to recycle cans than other materials because cans should be washed, delabeled and flattened. Cans are made of various metals. All aluminum cans, if separated out, are redeemable for \$300 a ton or 15 cents a pound. This price is so good that a few towns are beginning to separate their metals even though aluminum is very light. Other cans can be sold to American Can Co. in Fairport for \$6 per ton. At this price several centers have had trouble finding a hauler, particularly when the Fairport bridge was closed which increased the distance for most. American Can Co. does not use the cans it collects; it delivers them to Atkins Waste Materials Inc. in the City and they ship them to steel mills where they are detinned and melted for reuse.

Ten towns sent their metal to American Can Co. in Fairport for recycling. According to American Can Co., they collected 287 tons*. Chili has collected 226 tons of metal, a figure which includes not only cans but also large metal articles such as autos and refrigerators.

The Pittsford recycling center is fortunate because the town has taken over the delivery of cans to American Can Co. in Fairport. The trip is relatively short; the highway department takes the cans at its convenience and bears the cost of truck and driver. The town made 6 trips in 1974, delivered approximately 15 tons of metal, and received \$91.98. Limited help of this type is of enormous value to recycling centers and the town was saved the landfill space that would have been needed for 15 tons of refuse.

* This figure, given by American Can Co., includes a small contribution from the United Cerebral Palsy Association.



Paper

Estimating the amount of paper recycled in the County by examining data from recycling centers is not possible. Too much paper is taken directly to paper salvagers by organizations such as the scouts and by individuals. Much of the paper collected here is shipped to the Buffalo area and used to make wallboard and gypsum board (6). The market has always been seasonal; however in 1974-1975 building nationally was slowed, the market for paper decreased, and recycling centers had much difficulty in disposing of their paper. Pittsford was paid \$15 a ton in June of 1974, by August it dropped to \$12.50, by November to \$6.00 and now the paper is collected but they are not paid. Under these circumstances some recycling centers, particularly those that pay the haulers by letting them keep the money they get from selling the paper, could not get haulers and the paper was landfilled. HOWEVER, THE SALVAGERS HOPE THAT THE SITUATION IS TEMPORARY and some, such as Theta Systems of Western New York (formerly Better Life), are willing to pick up the paper from established customers so that there will be a supply when it is needed.

Galens Manufacturing Corporation in Clyde makes insulation from newsprint. They will accept only carefully sorted material. It is impractical to depend on individuals to sort that carefully 100% of the time, so recycling centers that sell paper to Galens must make a special arrangement to have the paper sorted (see below). Galens will not accept paper sold through a salvager. They pay \$25 a ton for delivered newsprint, but are not accepting paper at present. They hope to resume in September.

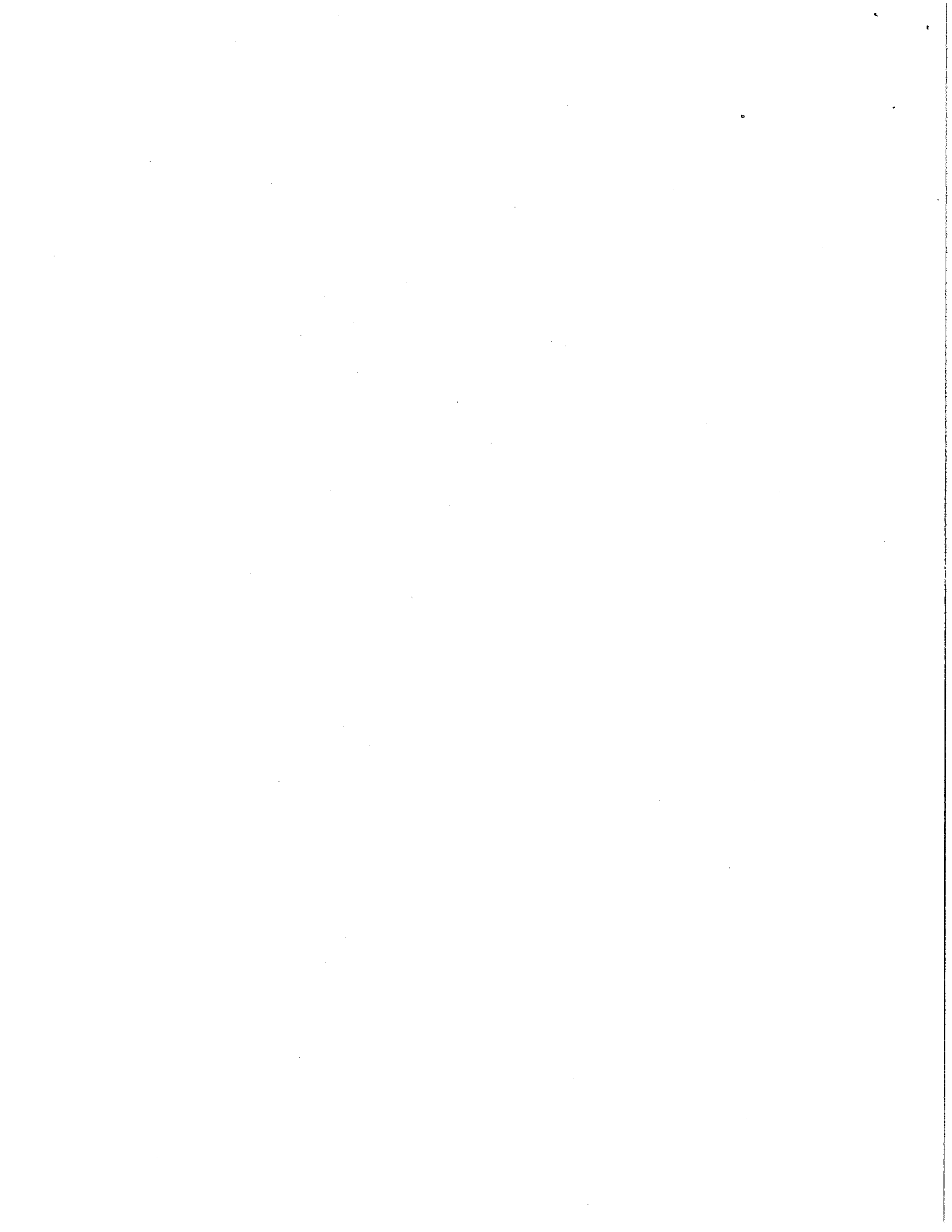
There is no practical way to recycle paper into paper in Monroe County. The nearest factory is Garden State Paper Co. in New Jersey. Garden State uses about 300 tons of paper per day. Garden State has as much paper as it needs, and even if it did not, the cost of shipping paper by rail to N.J. is high.

Eight recycling centers estimate that they collected 505 tons of paper in 1974. Partial records of the costs and profits for selling paper in Pittsford are available for 9 months of 1974 and complete records for 5 months. An analysis of these records shows that recycling paper has fixed costs and must net \$12 per ton if the paper is to pay only for the hauling.

Table 4. Paper Recycling in Pittsford - 1974

<u>Month</u>	<u>Tons Collected</u>	<u>Total Income</u>	<u>Income/ton</u>	<u>Rental \$65/month</u>	<u>Hauling \$60/month</u>	<u>Rental + Hauling</u>
Feb-April (a)	33.7	\$144.75	\$4.30	none	none	0
June	9.6	139.88	15.00	no record	no record	?
July	20.5	312.30	15.00	\$ 65	\$240	\$305
Aug-Oct	46.3	582.52	12.50	195	480	675
Nov	21.0	126.33	6.00	65	180	245
Dec	no record	no record	no record	65	240	305
Totals	131.1	1305.78		390	1,140	1,530

(a) While paper prices were high, the hauler was paid from the sale of the paper and the \$4.30 entry is net profit.



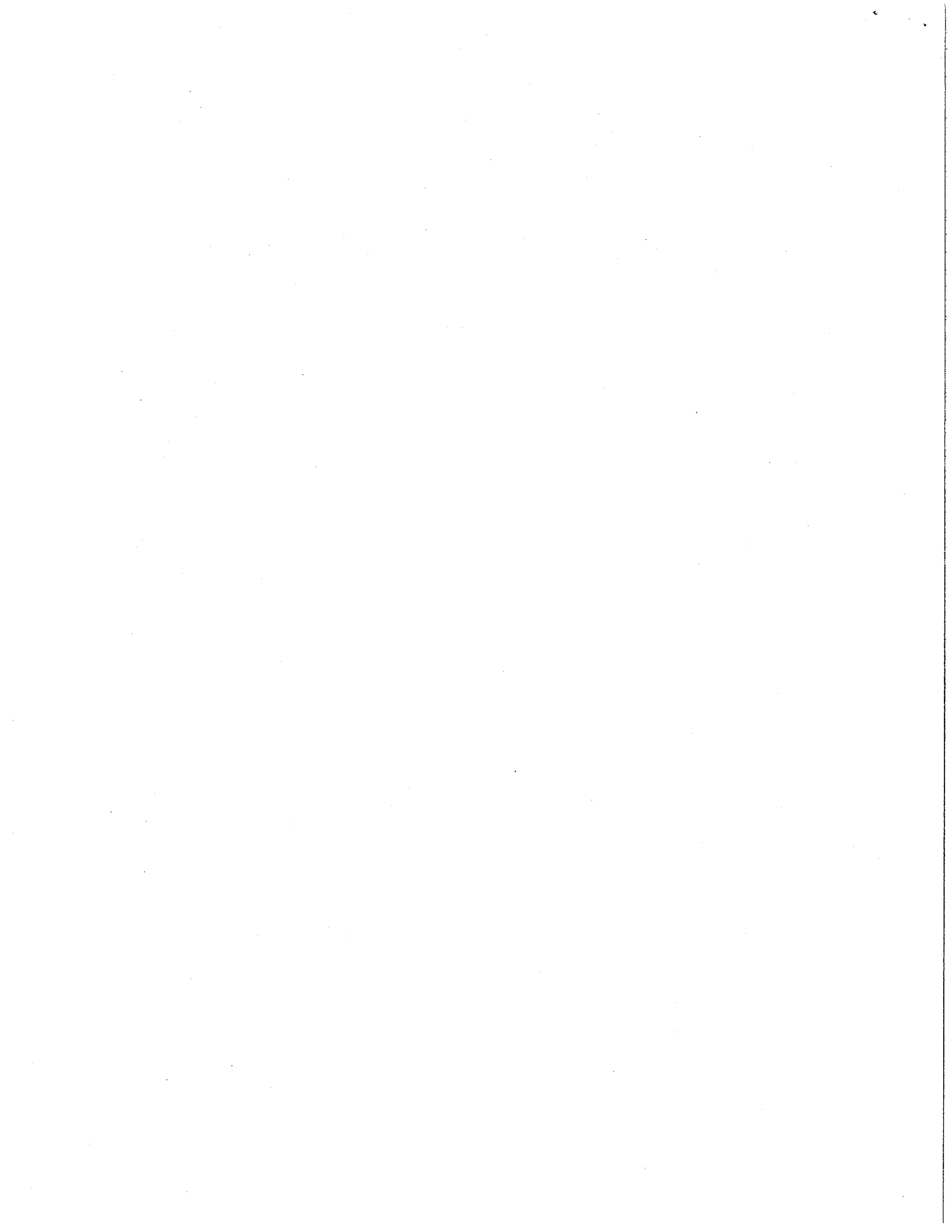
It cost \$1,530 to dispose of paper in Pittsford for the six months, July-December. Doubling this gives an estimated cost of \$3,060 to recycle paper for a year. The income from recycling glass during the same period, after paying all costs, was approximately $\frac{1}{2}$ the cost of recycling paper. Consequently, recycling some paper is possible, if the cost of recycling paper can be subsidized by the income from recycling glass. A center that wishes to use its income from glass to subsidize paper could consider the following program:

1. Keep up a campaign to encourage residents to bring as much glass as they can to the center. Sell the glass. Recycling Info will supply flyers to those who request them.
2. Ask newsprint recyclers to store as much at home as practicable for the next few months, on the chance that the price of recycled paper will go up.
3. Also provide a mixed paper collection site at the center, for all paper other than newsprint.
4. Ask your hauler to take the mixed and some newsprint to the salvager. Pay for this service out of the proceeds of recycling glass. Buy this service as long as your money holds out.
5. When Galens in Clyde starts accepting paper again, encourage local scout troops to sort the newsprint stored at the center and take as much as they can to Galens. This will earn them \$25 a ton, and will move some of the paper; probably not a lot, but they will benefit because they will not have to collect house to house, and every little bit will help.
6. If, after you have done your best, there is still paper left over, and there probably will be, ask the town to take it to a landfill. Inform the citizens periodically how much paper you succeeded in recycling (on a bulletin board at the center) so that they do not become discouraged at rumors that all of it is being buried in landfills. When industry is ready once again to recycle large amounts of paper, your town will be ready to supply it through the center.

Comments from the Towns on Recycling Centers

In order to collect the data in Table 1, calls were first made to the Towns. In addition to supplying data, a number of those questioned talked about the recycling centers:

1. Many towns felt the recycling center constitutes a public service, but is a troublesome nuisance to the town government.
2. Many towns felt recycling is not a money making proposition.
3. In many centers hauling is done by private collectors and the town has no idea how much has been recycled.
4. Some type of restricted hours and an attendant make a smoother running operation.
5. Some of the "public" still abuse recycling centers, and each center requires housekeeping by volunteers or hired personnel.



Costs and Benefits of Running the Pittsford Recycling Center in 1974

<u>Material</u>	<u>Expenses</u>	<u>Income</u>	<u>Difference</u>
Land	donated (town)		
Glass	\$1,777.50	\$3,127.30	+\$1,349.80
Paper	1,530.00	1,305.78	- 224.22
Cans	donated	91.98	+ 91.98
Extras - Cordwood in Pittsford	cutting donated	351.00	+ 351.00
	<hr/>	<hr/>	<hr/>
	3,307.50	4,876.06	1,568.56
Profit			\$1,568.56
Full time employee	\$9,500.00		

In 1974 Pittsford earned approximately \$1,500. It could not have been done without the help and work of the Town Highway Department. This figure does not include the wages of a full time employee who is paid by the Town. So even in Pittsford a recycling center was not a money-making proposition in 1974, but residents, responding to a survey, had indicated their willingness to support recycling with tax money. It saved the town many cubic yards of needed landfill space because the Pittsford landfill has only 7 acres left with an estimated life of 2 years (7). Finally, it permitted those residents who so wished to have their discarded materials reused, and the reuse of these secondary materials contributed to energy conservation.

Final Note

The newest figures available to Recycling Info have just come from the Webster recycling center which was reestablished in 1975. The center was open a very limited length of time weekly, but in a 10 week period 35 tons of newspaper, 22.6 tons of glass and 2.36 tons of metal were collected. This indicates that the public is still eager to recycle, if given the use of a properly operated recycling center.

References

- (1) *Hercules Corporation: Market Analysis - Solid Waste Reclamation Products - Interim Report; June 1973*
- (2) Fish, John; "Do-It-Yourself Recycling: 'Organization' Key in Pittsford;" *THE LINK*, Vol. 1, No. 2, September 1974
- (3) Fish, John, Chairman, Pittsford Environmental Board; "Recycling in the Town of Pittsford During 1974"
- (4) Population estimate taken from *Monroe County Preliminary Comprehensive Plan*, Monroe County Department of Planning, December 1974
- (5) Van Tine, Kenneth G., (Owens-Illinois), *Waste Reduction Conference Comments*, April 3, 1975
- (6) Adler, D. et al, *Recycling Paper in Monroe County on a Large Scale*; RCSI Bulletin #136, March 1972
- (7) Figures from the *Genesee/Finger Lakes Region Solid Waste Management Plan, Special Study Series*; Report No. 11, 1974

