

What's best way for Oakland to recycle paper?

Second in a series on the Oakland County solid waste plan. The writer is a member of the County Act 641 Committee studying the proposal and these are her views.

By NANCY KOURTJIAN

Recycling — making new paper from old — makes sense. Processing using paper fibers, gleaned from household and commercial waste, consumes less energy than making new paper from virgin wood.

Economically, when it costs us more to bury paper in scarce landfills than to separate and recycle it, then we will recycle paper.

But there's a twist: Paper can also be a fuel.

How much paper will be needed to fulfill the requirements of the proposed Oakland County energy recovery facility? Would the energy and/or money we save justify removing paper from the rest of the garbage?

What is the best way to separate paper?

ENERGY AND cost trade-offs will determine these choices for the Oakland County Solid Waste Planning Committee and the county staff. A 20-year plan must be ready for the County Board of Commissioners next December.

Regarding garbage quotas, Milton Handorf, Oakland's director of public works, indicated only 40 percent of the total waste stream will be needed. This would provide enough waste to efficiently operate the energy recovery incinerators planned for Pontiac, Wixom and Rochester.

Thus, individual companies could remove newspapers before their waste is sent to county facilities and sell them to companies such as Royal Oak Waste Paper and Metal Co.

Dennis Benson of Royal Oak quoted a current paper price of \$20 a ton, deliv-

ered. Benson foresees a stable market for the next two years.

WHETHER IT'S done on countywide or town-by-town, paper recycling should be backed by a long-term contract with a company willing to buy this valuable resource at a price that balances the costs.

Once the county has a guaranteed market, a method of source separation must be chosen. There are two options: 1) a curbside system that pulls out paper at the source, and 2) a centralized, mechanical separation operation at a city or county facility.

Flakt, a company based in Stockholm, Sweden, has asked the county to consider its 3-R air classification system. This "Resource Recovery from Refuse" process uses air and mechanical equipment to separate paper, glass, metals and plastic from other solid wastes. Suited to modular units, it handles six tons an hour.

The trash is blown and flailed through various cylinders and contain-ers. Magnets remove ferrous metal, and gravity pulls out the other, heavier materials.

The remaining lighter materials are forced through openings of various sizes. This separates plastics, organics and paper. The paper is flash-dried and divided into higher and lower quality pulps, which are then baled.

THE SWEDISH firm claims its flail mill operates more effectively than the hammermills used in U.S. classifiers and uses 90 percent less electricity.

Flakt designed and built Europe's first full-scale material resource recovery facility in Wijkster, a tiny town in the north of the Netherlands. This commercial operation uses air separation to recover 71,000 or the 137,000 tons of domestic waste processed yearly, including 18,000 tons of paper and 44,000 tons of compost.

The large quantity of compost may

be due to the Dutch habit of eating fresh vegetables and enjoying fresh flowers at most meals.

The Netherlands also has a highly successful national paper recycling program carried out by volunteer groups such as Boy Scouts. Thus, only 20 percent of the remaining waste is paper.

By comparison, in the United States, 33 percent of the total solid waste is paper or cardboard.

ANOTHER FLAKT plant, formerly a demonstration model in the Stockholm municipal incinerator facility, now operates commercially in Japan.

Clearly, efficient waste disposal is far more critical and immediate to the Dutch and Japanese, both highly industrialized countries with limited land areas, than to us.

Moreover, Europe imports most of its fuel, and it faces a shortage of paper fibers in the mid-1980s — a double incentive toward a system which recy-



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vers paper and shows a net energy gain.

Nonetheless, there are serious drawbacks to air classification systems, especially when used with shredders to make refuse-derived fuel. Plagued by explosions and frequent shutdowns,

shredders require expensive maintenance.

Serious problems with air/shredder operations such as Toronto's are "run of the mill," said Milton Handorf.

Therefore, the worth of resource and energy recovery using mechanical sep-

aration may be much less.

"Flakt will have to research the markets for recovered materials in Oakland County and prove their system works before the committee and staff would consider the proposal," Handorf said.

THE OTHER alternative is curbside pickup of paper.

This has been tried in many communities with varied success. In Grand Rapids, Recycle Unlimited formerly served 4,000-5,000 homes collecting paper, glass, metal and plastic. Due to high fuel costs and other financial difficulties, it now picks up from only 500 families.

Employees are paid, but the operation does not break even, said Bill Mulder, director of Recycle Unlimited. There are also many collection sites in Grand Rapids where recyclable items may be dropped off.

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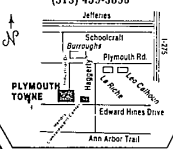
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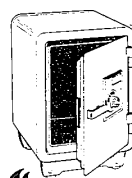
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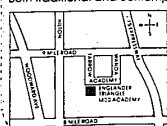
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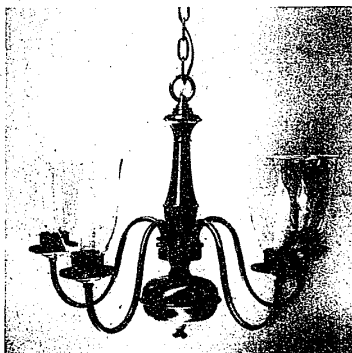
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