

TURNING GARBAGE INTO MONEY

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A METROLAND SPECIAL REPORT TRASH TROUBLES GRAPPLING WITH OUR GARBAGE

A tattered basketball shoe, a Donald Duck plastic toy, VHS tapes and a championship trophy sit scattered in a sorting room at Canada's largest waste recovery plant.

These are some of the more unusual items sorters have pulled off production lines of the Material Recovery Facility (MRF) in Brampton, where Peel Region's residential blue box items arrive to be separated, sorted and bundled.

"If you stand around here long enough, you will see all sorts of things," Peel waste supervisor Kevin Mehlenbacher said.

Only about 45 per cent of recyclable items from households across Ontario ever make it to one of these plants. More than half of municipal garbage goes to landfills instead.

Peel sells much of the material that comes to this plant in Brampton to China and the United States, where it is reused in new products such as aluminum cans or plastic bottles. The region's total take is about \$10 million a year.

But if households started recycling more, municipalities could strike deals with a new breed of entrepreneurs who understand garbage equals dollars.

The North American waste stream contains about \$8 billion to \$10 billion worth of valuables, said Wes Muir of Waste Management Canada, a private recycling and disposal company.

A major challenge for municipalities is finding markets for recyclable materials.

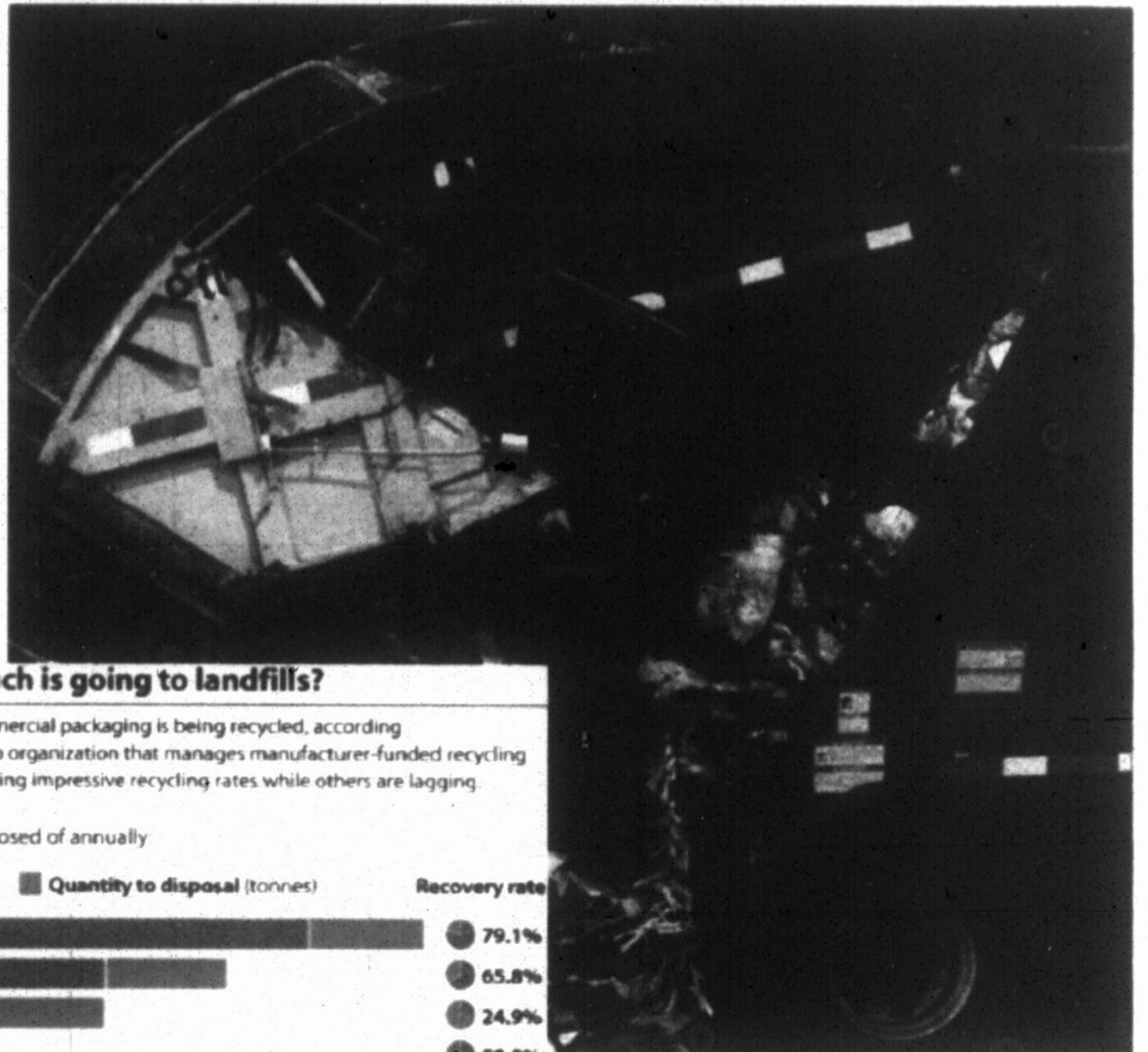
"Recycling has been around for three decades, but the problem is that end markets have not been established for many materials," Mr. Muir said.

Thirty to 40 per cent of North American recycled materials are going to China, India and South America, where demand is growing. There is a booming market for aluminum cans — which fetch the highest price of all materials — as well as PET and HDPE plastics, Muir said.

PART 1: Garbage outstripping space

PART 2: Fewer landfills in future

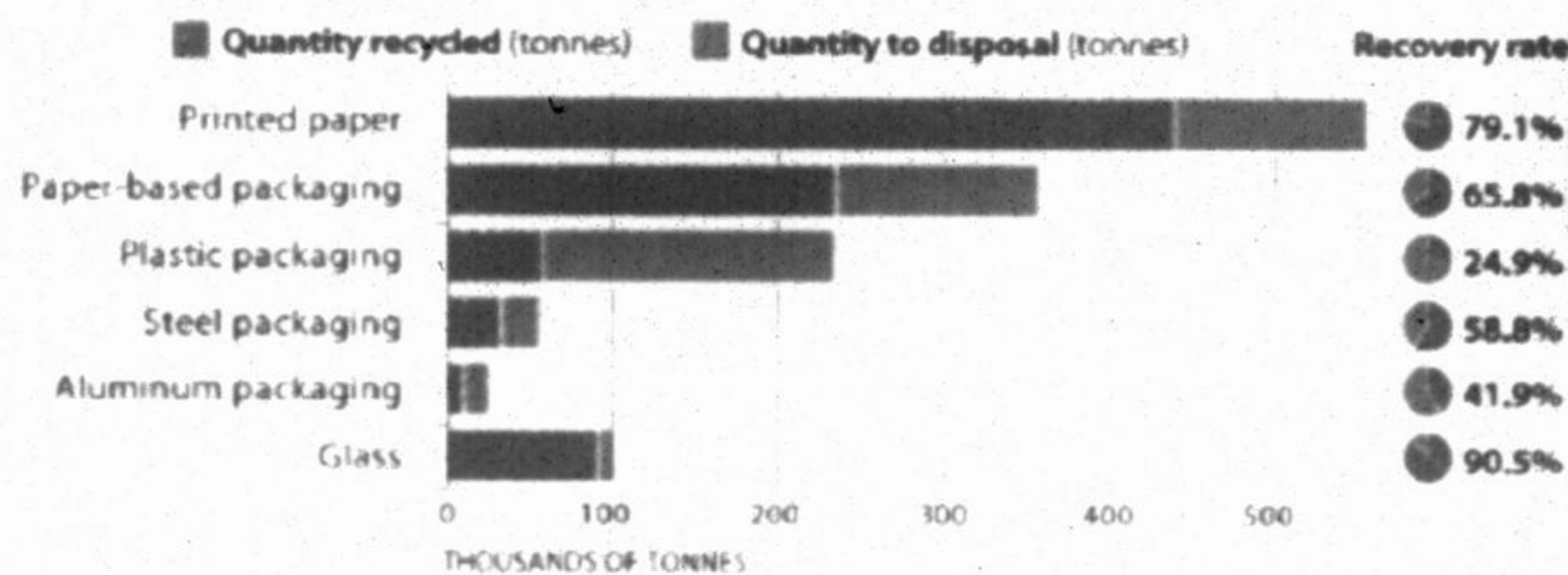
Thirty to 40 per cent of North American recycled materials are going to China, India and South America, where demand is growing. The new breed of entrepreneur understand the value of our trash.



PAPER AND PACKAGING: How much is going to landfills?

Nearly two-thirds of Ontario's printed paper and commercial packaging is being recycled, according to Stewardship Ontario, a private product-stewardship organization that manages manufacturer-funded recycling programs. Some materials — notably glass — are achieving impressive recycling rates while others are lagging.

BY CATEGORY What's recycled and what's disposed of annually



SOURCE: STEWARDSHIP ONTARIO, 2009 FIGURES

Donald Campbell, Thana Dharmarajah, Dean Tweed // THE HAMILTON SPECTATOR

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There's a move in the municipal waste sector to find new ways of making money for towns and cities by encouraging companies to tap into the value of what society is throwing away. The more waste a municipality can sell, the less it has to spend of taxpayer dollars to manage garbage. Hopefully consumers would buy in as well, leading to higher recycling rates — relieving the pressure on landfills.

MAKING WASTE INTO GASOLINE

In the U.S., for example, Texas-based Terrabon is developing technology that converts organic materials and commercial food wastes into organic salts, which is then made into a high-octane gasoline. They are using what's in our green bins.

In a world of diminishing landfill space, it's important to find sustainable alternatives in dealing with waste, said Malcolm McNeill, the chief financial officer.

The technology exists only on a demonstration scale, but when commercially ready has the potential to process 800 tonnes of wet waste a day — the type of system

that could some day pay to get Ontario's organic waste.

The push to view waste as a resource — instead of as a problem — has also seen companies convert trash into new products, a model known as up-cycling.

Toronto's Therma Green Innovative Foam Technologies uses a byproduct of the manufacturer E.F. Walter Inc. to develop products such as holding ponds for irrigation, synthetic turf, landfill covers and liners, as well as green roofs.

They are made in part from the high-density polyethylene foam waste generated by E.F. Walter for a range of industrial products. Therma Green is an example of how waste that's currently being landfilled could be profitably reused.

Other companies are taking regular household consumer waste and flipping it. Terracycle, founded in 2001 by Princeton University freshman Tom Szaky, produces more than 1,500 products, ranging from duffel bags made out of old Kool-Aid and Del Monte drink pouches to park benches and tables made from plastic containers.

MUNICIPALITIES NEED SOLUTIONS NOW

But these industries are in their infancy and municipalities need solutions now. Incineration may be a route more communities are willing to take, said University of Toronto professor Philip Byer.

Only about 1 per cent of waste in Ontario is incinerated now. The only residential incinerator is the Algonquin Power Energy

From Waste Facility in Brampton. The plant burns about 500 tonnes of mostly residential waste and generates nine megawatts of continuous energy — enough to power 5,000 to 6,000 homes.

Advocates say incineration is an acceptable solution because it generates energy from material that would otherwise be landfilled. Critics say incinerators cause air pollution and that the most energy-efficient materials to burn — such as paper and plastic — are also highly recyclable.

"I am not saying (incineration) is a good idea, but it's maybe something you will see more of," Mr. Byer added, whose specialty is municipal waste management.

Experts say one of the most important solutions to today's landfill problems is to force manufacturers to create more reusable products, an approach known as extended producer responsibility (EPR).

"EPR is effectively making what goes into the waste stream the problem of the people who put the products into the market in the first place," York University environmental studies professor Mark Winfield said.

This is done by forcing manufacturers to redesign products so they can be reused or requiring manufacturers and businesses to pay a government-imposed fee on hard-to-recycle products.

Ontario could legislate EPR policies similar to the European Union, which forced producers to make cars and packaging easier to take apart in pieces to be reused. But there is no move toward that kind of policy in Ontario at the moment, Mr. Winfield said.

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