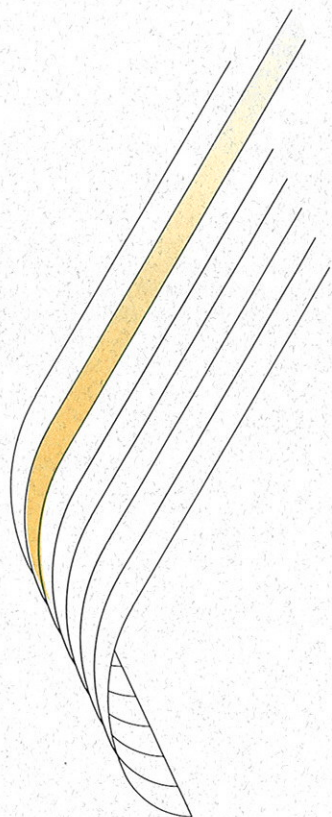




Recycling in Canada



Across Canada, waste management has become an issue of vital importance. Many regions are facing a critical shortage of landfill space, and there are growing concerns about the environmental impacts of traditional waste disposal methods. At the same time, the mountain of waste produced by Canadians continues to grow at an alarming rate.

Recognizing the urgency of the waste problem, the federal government, provincial and municipal governments, and concerned businesses and individuals have been working to reduce the amount of waste needing disposal. In April 1989, the then Canadian Council of Resource and Environment Ministers — now the Canadian Council of Ministers of the Environment — agreed that targets and schedules for waste minimization be established including a fifty percent (50%) reduction in waste generation by the year 2000.

Achieving this ambitious goal of a 50 percent reduction in waste by the year 2000 will require a concerted effort by governments, the private sector, and individual Canadians. Many positive steps have already been taken — but more are needed. We must all respond to the challenge — by changing our industrial and commercial practices, our household habits, and most importantly, our attitude towards waste.

The 4Rs

The keys to 50 percent waste reduction are the so-called 4Rs of waste minimization: Reduction, Reuse, Recycling and

Recovery. The 4Rs are a hierarchy, with reduction being the preferable option — where possible, it is best not to produce waste at all. If waste is produced, it should be reused if at all practical. The third-best alternative is recycling. Finally, it may be possible to recover materials or energy from waste which cannot be reduced, reused or recycled.

The Road to 50%

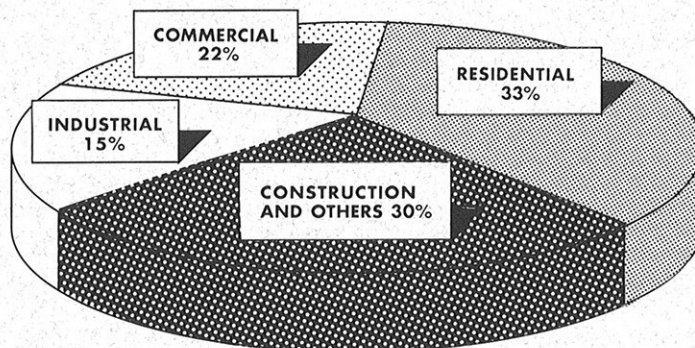
Across Canada, there are many examples of successful recycling programs. As we strive to reduce our wastes, we can learn from the experiences of these pioneers.

Household Wastes

One of the best-known examples of household recycling is Ontario's "blue box" program, which serves more than 2.2 million households in the province. Householders in participating municipalities are given a blue plastic box in which to collect newspaper, glass, metal containers and, in some cases, plastic soft drink bottles; some cities also collect waste motor oil. Once per week, special recycling crews collect these recyclable materials from blue boxes set out at the curb.

Participation in Ontario's blue box program has been very good (70 to 80 percent), and the program diverted more than 200,000 tonnes of waste in 1989. These results have inspired cities in other provinces — including British Columbia, Alberta, Quebec, Nova Scotia and New Brunswick — to initiate similar curbside recycling programs.

Canada's Solid Waste Distribution - 1988
30 MILLION TONNES ANNUAL (NON-HAZARDOUS)



But the household blue box is only the first step on the road to 50 percent waste reduction. In most cities, blue box collection is restricted to single-family homes and low-rise apartments. Even the best existing programs divert only about 10 to 15 percent of residential wastes from disposal. As a result, pioneering municipalities are using a variety of approaches to attack the remaining wastes.

- Municipalities such as Mississauga, Guelph, Toronto and Ottawa, Ontario have set up recycling depots in highrise apartment buildings. This has involved adapting collection methods and equipment to a range of building types.
- Recycling depots have been established in many rural areas, where distances and collection costs make curbside programs impractical. In Wellington County, Ontario, for example, depots at landfill sites and municipal properties have proven to be very popular. In a pilot project, residents in some areas of the county were provided with blue boxes in which to collect and transport recyclable materials to the depots. Participation and yields increased dramatically, and the county is now providing blue boxes to other residents served by the depots.
- Nova Recycling, a non-profit company in Newfoundland, has established recycling buy-back centres and mobile units to collect metal and plastic soft drink containers from urban and rural areas in that province.
- Increasing attention is being paid to organic wastes (food and yard wastes), which account for more than one third of the residential waste stream. Some municipalities, such as Metropolitan Toronto, are trying to encourage homeowners to compost their organic wastes by providing them with low-cost composters. Other municipalities, including cities in Ontario, Quebec and British Columbia, are experimenting with curbside collection of yard waste, and with composting depots.
- The city of Guelph, Ontario is testing variations of the "wet/dry" waste separation system used in many European cities. In a pilot project, householders have been asked to separate their waste into wet and dry streams; some have been given special containers. The "wet" wastes (e.g.,

organic materials) are composted, and the dry waste stream is being surveyed to determine its contents.

- Approximately 1 percent of household wastes contain hazardous materials and should be disposed of in licensed hazardous waste management facilities. Many provinces have been encouraging municipalities to collect these materials at special "household hazardous waste (HHW) day" events or by operating HHW collection depots. "Toxic Round-ups" have been held in major cities in Alberta, and municipalities in Ontario, Manitoba and Saskatchewan have also organized special HHW days. However, the costs of these special events have prompted municipalities such as Winnipeg in Manitoba, and Toronto, Guelph and the region of Peel in Ontario, to establish permanent depots to which residents can bring their hazardous wastes.

These are only a few examples of the residential recycling activity taking place across Canada. But residential wastes account for only about one third of Canada's solid wastes. Significant efforts are also being made to recycle commercial and industrial wastes.

Commercial and Institutional Wastes

Offices, retail outlets and institutions such as governments, schools and hospitals produce more than 20 percent of Canada's solid wastes. Construction wastes account for another 30 percent. The growing realization that recycling can yield economic benefits in the form of reduced waste disposal costs, as well as revenues from the sale of recyclable materials, has prompted commercial enterprises to recycle a variety of materials.

- The federal government's Papersave program in the National Capital Region recycles more than 10,000 tonnes of office paper annually; in 1989, savings in avoided waste disposal charges were in excess of \$350,000. This program, which operates in more than 80 buildings, has been operating since 1976. It is now being upgraded with new equipment and collection service; this is expected to significantly increase yields and revenues.

- Canada's largest office building — First Canadian Place in Toronto — is also a model of recycling initiative. Cardboard, fine paper, beverage cans and glass bottles are recycled, wooden pallets are reused, and food wastes are saved for collection by a local pig farmer. In total, approximately 30 tonnes of waste are diverted daily.
- Many smaller businesses are finding it profitable to source-separate fine paper and old corrugated cardboard for recycling. For example, in Edmonton, Alberta, a non-profit organization called Paper Chase Recycling hires unemployed young people to pick up and process waste paper from offices for recycling.
- Municipal governments are beginning to require consideration of recycling in the early stages of building planning. For example, the City of Toronto recently enacted a by-law requiring that waste management plans be included in development plans. Among other considerations, developers are required to ensure that sufficient space is provided in new commercial buildings to effectively carry out a materials recovery program.
- Gypsum wallboard, or drywall, is a significant source of waste, and can produce toxic hydrogen sulphide in landfill sites. One company, New West Gypsum Inc., has been recycling gypsum waste in New Westminster, B.C. since 1987, and is now expanding into Ontario. The company crushes and screens wallboard waste to produce marketable gypsum and paper.

Industrial Wastes

There are numerous opportunities to recycle industrial waste, and Canadian industries are capitalizing on them. Savings in waste transport and disposal fees can be significant, even if the material recycled is not highly valuable.

- The Canadian Waste Materials Exchange (CWME) and provincial waste exchanges help industries get in touch with potential users or recyclers of their wastes. Since it started in 1978, the CWME has assisted in the recycling and reuse of approximately 355,000 tonnes per year of waste from a variety of industries.

- Canadian entrepreneurs have also been finding new business opportunities in recycling. One Calgary company, Industrial By-Product Recycling (IBR), specializes in finding recyclers or users for industrial by-products.
- Boeing Canada's de Havilland Division in Downsview, Ontario recycles approximately 25 percent of its waste stream. Cardboard, computer printouts, office paper, cans and bottles, and scrap metal are all collected for recycling.
- The Society of the Plastics Industry of Canada has developed a coding system for plastic containers, in order to help consumers determine which containers are recyclable and to assist recyclers in sorting by plastic type. This system is being implemented on a voluntary basis by plastic container manufacturers and users.
- The foundry industry in Canada is estimated to generate more than 600,000 tonnes per year of waste sand from mould and core-making processes. Highland Foundry Inc. of Surrey, B.C. is one company that has installed equipment to reclaim its sand. Highland has reportedly reduced its purchases of new sand by 90 percent.

Closing the Loop

Simply collecting materials is not recycling. In the past, many recycling programs floundered because the markets for the materials collected were unreliable and unpredictable. A similar problem faces us now: if we increase the supply of recyclable materials without increasing the demand, materials markets will become glutted and the revenues paid to recycling programs will fall.

In order to build sustainable recycling systems, we need to "close the loop" by increasing the demand for products containing recycled materials, such as hand towels made from recycled paper, and re-refined motor oils. A number of government and private-sector organizations have been helping to close the recycling loop, by implementing purchasing policies that favour products containing recycled materials.

- Environment Canada encourages the use of post-consumer paper fibre in many of its offices and stationery papers. As well, the federal government currently purchases, for distribution

and use, items containing recycled paper and fibres; these items include MP "householders", newsletters, envelopes, employee business cards, kit folders, stationery, paper towels, cardboard boxes and packaging material. The government is planning to introduce additional recycled paper products in the near future. As well, Canadian-made photocopy paper that contains 50 percent recovered waste from collection programs is being used by several departments, and is being stocked in the government's Stocked Item Supply.

- Many provincial governments are also introducing policies to encourage the purchase of products made from recycled materials. The governments of Manitoba and Ontario, for example, have both announced such policies.
- In Ontario, all levels of government are working together through the GIPPER (Governments Incorporating Procurement Policies to Eliminate Refuse) Committee, to develop government purchasing policies that will help reduce waste and encourage the purchase of products made from recycled materials. Members of this committee include representatives from federal and provincial environment and supply departments, municipal governments in Metropolitan Toronto, the greater Toronto regional governments, the Canadian Standards Association, and the Federation of Canadian Municipalities.

Materials markets have always been cyclical, in part because of the lag time required to build new recycling plants when supplies of recyclable materials increase. However, a concerted effort to increase our consumption of products containing recycled materials will go a long way towards stabilizing markets for recyclable materials and developing sustainable recycling systems across the country.

This factsheet is part of the Office of Waste Management's "Rainbow Series". Each colour in the rainbow represents one waste management activity as follows:

- 1) Pink - Classification
- 2) Orange - 4Rs (Reduction, Reuse, Recycling, Recovery)
- 3) Yellow - Transportation
- 4) Light Green - Storage
- 5) Dark Green - Treatment
- 6) Blue - Disposal
- 7) Purple - Waste Types

Further information can be obtained from:

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