
A Private Member Looks At Waste Management

A frequent complaint of private members is the lack of opportunity to participate in policy-making, usually the reserve of Ministers and civil servants. There are, however, ways a government can take advantage of the knowledge of its elected members. Last year the British Columbia Minister of the Environment released a discussion paper "The Provincial Role in Municipal Solid Waste Management". Among other things it set up a Task Force chaired by the author to undertake a four month program of hearings and to make a report. This article summarizes that report and raises issues that may be relevant to legislators in other jurisdictions.

by James T. Rabbitt, MLA

One product of the North American way of life is garbage. It flows in a rising tide from homes and businesses to municipalities, who are faced with disposing of it.

A small proportion of B.C.'s solid waste is burned. Less still is recycled. The great majority winds up in B.C.'s 236 open-air landfill projects, of which 60 percent will reach their limits in the next ten years.

There have been changes. In 1988, the Greater Vancouver Regional District's new Burnaby incinerator burned about 10 percent of the province's solid waste, producing saleable steam energy. A new resource recovery plant in Coquitlam will recover up to 50 percent of the 225,000 tons of commercial waste it will process. Still, most solid waste will go to landfill sites. Public concern about the safety and appearance of waste disposal methods will continue to grow.

Municipal waste must be reduced. How? And by whom?

Basic Recommendations

Most of the briefs submitted to the Task Force stressed the importance of reducing the volume of materials that require disposal as waste. The message was clear: it is time for action. Municipalities are aware of the need for better solid waste management. The public is prepared to cooperate. The province ought to adopt the five R's of Municipal Solid Waste Management.

- **Reduce** by promoting the use of products and packages that create less waste;
- **Re-use** by promoting containers, such as beverages bottles that can be used again;
- **Recycle** by separating useful materials from waste materials before collection;
- **Recover** by extracting useful materials and energy from waste after collection; and managing the
- **Residue** by disposing of final waste materials in an environmentally safe way.

The province ought to assist municipalities with grants totalling up to \$30 million over the next five years, with a follow-on five year program aimed at sustaining the gains. The goals: reduce municipal waste by at least 35 percent — 25 percent or more through recycling, and a minimum of 10 percent through composting. The Ministry of Environment should gear up to support local government by creating, and allocating resources to, a new Solid Waste Management and Recycling Section within the Waste Management Branch.

It is the provincial government's job to set environmental standards and enforce them. Local governments — regional districts and municipalities — should do the job of planning and implementing solid waste management practices because they understand local conditions. The *Waste Management Act* of 1982 allows them to consolidate all their provincial waste disposal permits by preparing waste management plans that combine environmental protection with unique community needs. All regional districts, and all municipalities not covered by regional district plans should prepare waste management plans by December 31, 1994.

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British Columbia will generate 2.2 million tons of municipal solid wastes this year — 2.02 kilograms per day for every man, woman and child. That is about 7000 pounds a year for a family of four. If you live in our culture for 70 years, your personal contribution to the solid waste problem would be 60 tonnes.

The Province can help by providing technical assistance through the Ministry of Environment and funding to defray the costs of preparing the plans: \$5000 plus 50 percent of the next \$10,000 up to a maximum of \$10,000 per applicant. Regional districts should be eligible for this grant for each municipality included in their plans.

The Province should also assist by conducting studies that will help local governments plan. For example: studies of the true costs of landfills and incinerators; the composition of waste; and markets for recyclable materials. The subjects are listed in the recommendations. The Province should also fund research in solid waste management.

The *Municipal Act* should be amended to equip local government with appropriate authority to deal with this problem. Solid waste disposal should be made a regional function, and local governments should be required to establish a capital reserve covering the long term responsibility for facilities. They should also have more freedom to raise revenues for these purposes. The Province should show its commitment to sound waste management by paying for the use of local facilities by provincial agencies.

Recycling and Composting

Much of municipal waste is recyclable. Recent studies suggest that B.C.'s waste is 40% paper, 6% glass, 5% metals, 9% plastics, 35% organic material, and 5% other materials. Thus over half is recyclable and over a third is compostable. Recycling has grown rapidly, especially in Ontario and the northeastern United States, where disposal problems have become severe. The programs vary greatly, but are aimed mainly at single-family dwellings. In 36 curbside pickup programs across North America, observers found that convenience is important. Collecting recyclables and garbage on the same day, for example, helped the public remember recycling. The same is true with special containers. The most common is the Blue Box — a 10-gallon plastic tub with "We Recycle" embossed in white. In five communities, participation rose from an average of 40 percent to 69 percent when containers were provided. One reason: their appearance

at curbside generates peer pressure to participate. Mandatory programs did not do noticeably better than voluntary programs.

What about the costs of recycling? Revenue from selling recyclables may not cover the cost of collecting them. But the saving in landfill use fees can generate a substantial reduction in cost overall. This has been the case in Pennsylvania, where 45 municipalities achieved an average saving of \$26.77 for each ton of recycled waste.

Only 31 of B.C.'s 172 regional districts and municipalities were operating recycling programs in 1986, and only 14 of these provided curbside collection. They had the potential to reach just 11 percent of B.C. households. But since 1986 the province has made progress. Delta began a curbside pickup program that is highly successful, and the Capital Regional District's curbside pickup program will start operating in March.

Composting, a form of recycling, is the natural breakdown of organic wastes into a material that can serve as a soil conditioner or mulch. This process reduces the volume of waste, as microorganisms convert much of it to carbon dioxide and water.

How much of municipal waste is compostable? Leaves and other yard wastes, food wastes, and other organic material — about a third of all municipal waste — can be composted for use by landscapes, nurseries, city works departments and home gardeners.

Large scale composting of leaf and yard waste started in Portland, Oregon eight years ago because of bans on backyard burning. Today two firms accept 300,000 cubic yards — 25 percent of the city's yard waste. They charge for their service, and market the end product. At least six municipal composting programs are operating in B.C. today.

For many of B.C.'s regional districts and municipalities, three primary barriers stand in the way of these programs:

- **First**, local governments tend to underprice their landfill costs. However, full cost-accounting estimates, prepared as part of their solid waste management plans will bring out the real cost of disposal, and the real economic value of recycling.
- **Second**, local governments may not know how to get started. The Ministry can remove that barrier by developing manuals for recycling and composting, and backing them up with ongoing technical support.
- **Third**, some local governments may be concerned about the stability of the markets for recycled materials. The Province could provide reliable markets through marketing coordination, regional development of recycling industries, purchasing preference for recycled materials, and other programs and policies.

The Province should not become involved in transportation subsidies, alleviating what for some is the greatest barrier to recycling — cost of transporting recyclable materials. This problem can be solved by developing new markets, and by

reviewing transportation regulations. The requirement for transportation subsidies will be addressed by local government.

Startup costs, particularly for curbside programs, may also be a barrier. The capital cost of Blue Box containers (estimated at \$5-\$8 each), buildings, public education, and collection and processing equipment could stand in the way. The Ministry should set up a five-year grant program for local governments. If their plans show that recycling or composting are justified, the grants should supply household containers, and a portion of the costs of other equipment and promotion.

The Province should also set a lead in recycling by setting up an office paper recovery demonstration project, beginning with the Parliament Buildings and expanding to all ministry and Crown corporation offices. The Ministry should also encourage commercial recycling programs.

Business, industry, and the public need to know what can be recycled and how. One industry can often use the wastes of another; but neither may be aware of the possibility. The Greater Vancouver Regional District has set up a hotline to answer recycling questions from the Lower Mainland. The Ministry should work with the GVRD and other jurisdictions to expand this to a toll-free service covering the whole province.

The Ministry should pay half the cost of the service.

On the industrial side, waste exchanges — regular bulletins listing wastes wanted and wastes available help industry to recycle bulk waste. There are seven in Canada and at least 20 in the U.S. Over six years, Canada's largest — the Canadian Waste Materials Exchange — diverted 1.4 million tonnes of waste, valued at \$44 million, from disposal to recycling.

The Canadian Council of Resource and Environment Ministers is soon to release its report on a worldwide review of waste exchange programs. Until that report is published the Ministry should fund half the costs of the Recycling Council of B.C.'s Industrial Waste Exchange.

Recycling programs should be self-sustaining, and should not depend on government wage and training subsidies for viability. Wherever possible, however, recycling programs that are already operating should be integrated into new operations.

Drawing off materials for recycling before they become part of the municipal waste stream will relieve some of the pressure on incinerators and landfills. But these materials must have somewhere to go. There must be an industry to reuse them, and a market for its products. Government can help. Through purchasing policy and consumer education, the province can increase the demand for recycled products. The province can

increase the supply of recyclable materials by giving primary recyclers (who collect and sell them) financial and tax incentives that make them more competitive with suppliers of virgin materials, and by promoting household recycling. In recognizing the value of the recycling industry, the province should give it high priority for assistance by the economic development programs of the Ministry of Regional Development.

The province's purchasing should give preference to materials made in B.C. partly, or completely, from recycled materials, starting with paper and lubricating oil. The province should encourage other governments, institutions and industries to do the same.

Provincially funded research and development will help find new users, and new production techniques, for recycled materials. The Province ought to establish a Recycled Product Research and Development Fund of \$200,000 per year for five years for that purpose. The Ministry should also become a centre for information about new technical developments in recycling.

Dealing With Rural Waste Problems

Most people are unwilling to transport garbage long distances. In rural areas, this has led to numerous small refuse sites, poorly kept and environmentally unacceptable. Most regional districts have now accepted responsibility for these sites, but many experience problems with windblown debris, bears, fire risks, and the insects and other pests that may breed there.

Some regional districts have solved these problems by replacing the old sites with transfer stations — ramps and rolloff containers for smaller volumes, enclosed push-pit systems for larger volumes. Waste is trucked regularly from transfer stations to a central or subregional landfill. For example, this approach has resulted in a vast improvement in waste control in the Upper Columbia Valley, and could provide a focal point for the start of rural recycling. Many regional districts, however, cannot afford the capital costs.

The Ministry should establish a capital grant program to cover half the costs of rural transfer stations up to \$20,000 per site.

About 65,000 automobiles and 200,000 units of white goods — mostly major appliances — are scrapped every year in British Columbia.

This is a significant disposal problem for rural areas. Cars and appliances may be scattered around the countryside at small disposal sites. The need here is to gather them at central sites in sufficient quantities to make it worthwhile for commercial contractors to crush them and haul them away. We recommend a new program: Every second year, rural regional districts will contract to have scrapped autos and appliances hauled to a central location for processing by a contractor. The Ministry will pay 50 percent of the collection costs.

Because some appliances contain substances like freon and mercury, we recommend that the Ministry set out a clear policy to landfill operators and scrap metal contractors about how they are handled.

Remote camps. Most remote camps use landfills. Some are well run; others are left uncovered and quickly attract bears, along with the usual problems. When the camps are abandoned, the landfills remain as eyesores. We recommend that remote camps of less than 100 people be required to 1) incinerate refuse daily, 2) use bear-proof containers, or 3) obtain a waste disposal permit to which specific conditions would be attached.

Dead farm fish can introduce disease to wild stocks, or cause other problems, if dumped in the ocean; if dumped on land they can attract bears or create health problems. Improper disposal of hunting kills or livestock carcasses can cause similar problems. The Ministry should provide clear direction.

Building materials. Wallboard and other wastes from construction or demolition can rapidly use up capacity at small rural landfills. The Ministry should work with local government, private landfill operators and the construction industry to develop a corrective strategy. Solid waste plans should examine ways to recycle or recover rather than dispose of these materials.

Generating Energy From Waste

Incinerated wastes occupy only a third or even a quarter of the space required by raw waste. Capital and operating costs for incineration, however, are relatively high, and emission control and ash handling complicate the process. The sale of RDF (refuse derived fuel) or of recovered energy in the form of electricity and steam can help defray costs.

There is much support in B.C. for generating energy from woodwaste, particularly in the interior — provided the energy could feasibly be fed to B.C. Hydro. However, incinerator emissions and ash disposal must meet Ministry standards.

We recommend that Ministers of State in regions with woodwaste surpluses make energy-from-woodwaste projects an economic development priority.

In Ontario, provincial programs help fund incineration projects that provide RDF or energy for electrical power. The federal government also provides assistance: the GVRD received more than \$8 million in federal funds towards its Burnaby incinerator, plus \$1.5 million in federal sales tax relief on the sale of the steam it produced. The B.C. Ministry of Energy, Mines, and Petroleum Resources is developing a program to provide capital grants to energy-from-waste facilities. We recommend that the program also include projects that produce RDF.

An Informed And Supportive Public

The public review made it clear that many people are anxious about the effects of solid waste management on their

environment and health. They support the principle of reduced landfill deposits, and are looking for alternatives. All they need is more and better information. This is recognized by the Task Force and reflected in many of our recommendations.

The school system is an important place to start, through classroom presentations and school and community programs that involve recycling. The Ministry distributes print and video material on solid waste management. We recommend that the Ministry of Education incorporate waste management into the curriculum, to ensure that students are reached consistently province-wide. We also recommend that the Ministry of Environment provide containers and technical support for recycling programs at schools, colleges and universities.

Adults need to be educated about solid waste, too. The Ministry of Environment should undertake province-wide consumer education programs that explain the advantages of recycling, discuss product packaging, and discourage littering.

A Better Way To Control Litter

The B.C. *Litter Act* (1970) made littering illegal and specified a minimum refund for soft drink and beer containers. After ten years, the Act was reviewed and found to be "waste management effective". More than 84 percent of 750 million beverage containers sold annually are recovered. There is room for improvement, however.

The present mandatory refund system should be extended to include rigid sealed containers of soft drinks, fruit drinks, mineral water, water, beer, ale, cider and coolers. Dairy products, milk substitutes and fruit juices should be exempt. Bottlers, brewers, and distributors should be required to collect a minimum deposit of five cents each for containers of a litre or less (10 cents each if the Province is able to work out a standardized price with Alberta and Saskatchewan at that level), and 20 cents for containers of more than a litre. It should be their responsibility to collect their returned containers from retailers, depots, or recyclers, and to pay them a handling fee of two cents per container. The Province should encourage the creation of a system of bottle depots to make containers easier to return, and to lighten the load on retailers.

This approach encourages consumers to return empties for the refund rather than discard them as litter. It remunerates retailers for returning empties to the bottler. And a mandatory deposit removes the opportunity of using the refund value to manipulate the cost of the product and create uneven competition among bottlers.

We need to know more about what litter is, where it comes from, and why. The Ministry should conduct a comprehensive study, then implement a long-term public education program. It should also work with the Ministry of Attorney General to draft legislation for the prosecution of litterers. A two-cent tax should be placed on drinks sold in non-rigid sealed containers, and the proceeds used for anti-litter and cleanup programs. We

also recommend the printing of anti-litter logos on convenience food containers.

Toward Reduced Packaging Wastes

There is a need for a detailed study of packaging in the waste stream. There is no common approach to this problem, which is significant. Studies suggest that 30 percent of all residential garbage is packaging, and that 90 percent of all packaging is wasted.

We received clear messages from our public contact: There should be more control over packaging, and recyclable packaging should be promoted. Non-recyclable packaging should be degradable, and non-toxic when disposed of. Manufacturers should contribute to disposal costs. To what we add: The Minister of Environment should work with ministers from other provinces to develop a national strategy aimed at this problem, and the Ministry should promote the recyclable design concept to industry.

Handling Special Wastes

Many consumer products — paints, automotive fluids, medicines, cleaners — are potentially hazardous to people and their environment. Biomedical wastes also pose dangers. For these reasons, collection programs have been organized in a number of U.S. states.

At present, the Ministry can only accumulate hazardous wastes in its eight regional storage depots for eventual shipment out of the province. The depots' capacity is strained. Radioactive, explosive, pathological, and biological wastes are handled separately; PCBs are separated for long term storage.

The Province has been working since early 1988 towards a treatment facility for special waste. Current effort is aimed at

finding a site. The Province should give this urgent priority by funding a third of the cost of suitable storage facilities in each regional district and preparing a manual for use by local authorities.

In principle, whoever creates waste should pay for its disposal. This should be the Ministry's long-term approach to costs. For example, the Ministry could impose a tipping fee surcharge of 50 cents per tonne on all waste dumped at landfills and incinerators. The proceeds should be used for solid waste management support programs.

The cost of collecting and disposing of certain hard-to-dispose-of products (including special wastes) should be reflected in an excise tax on their contents — a "waste initiators' tax". The Ministry should develop a list of these products by January 1, 1990.

Charging householders and industry directly for waste disposal according to their volume of waste has proved very effective elsewhere in reducing municipal waste levels and encouraging recycling. We recommend that the Ministry review the options in this area and encourage local governments to implement fees such as householder charges or tipping fees.

To Sum Up

The discussion paper aroused interest and opinion, and created useful discussion. This public involvement should continue by appointing concerned people from a variety of backgrounds to a Municipal Solid Waste and Recycling Advisory Committee. Its purpose should be to look into the many issues surrounding these subjects and advise the Minister of Environment on its findings. The public review process has raised public expectations, and a speedy response is appropriate. ♦