



Rock & Roll

The composting of Newfoundland and Labrador's waste

Newfoundland and Labrador have taken some concrete steps towards enhancing their waste management infrastructure. Composting will play a significant role in these changes.

The residents of Newfoundland and Labrador generate an estimated 2 kg/person/day or 400,000 tonnes annually. The Newfoundland and Labrador Waste Management Strategy (2002), as prepared by the Department of the Environment, lays out some bold goals.

A key goal is the jurisdictionally familiar 50 per cent reduction of wastes from disposal — in this case by 2010 — through waste diversion and other activities. A further goal is to take a more regional approach to waste management by distilling the needs of its residents from what are now many small landfill facilities to a number of larger regional state-of-the-art facilities.

Presently the annual waste management expenditure is estimated to be \$21 million. It's

estimated that the addition of infrastructure to upgrade the system will be in the range of \$150-200 million.

It's also estimated that 30 per cent of the waste stream is organic with another 37 per cent consisting of paper streams. Composting will have to play an integral role with regard to achieving these various goals. Largely this will be a function of developing programs to promote the diversion of various types of wastes including organic wastes. Disposal bans for organic materials are also part of the strategy.

For composting, the strategy leans heavily towards source separation. As well, it sets out minimum specifications for the development of high quality and effective in-vessel and windrow composting infrastructure.

Guidelines

The Department of Environment has been preparing "Environmental Standards for Municipal Solid Waste Compost Facilities." They're at the final draft stage and release is anticipated by early 2004.

The focus of these standards is to provide guidance on the composting of food-containing municipal solid wastes. Biosolids composting, perceived to be more challenging than municipal composting, is not addressed by these standards. Non-municipal solid waste feedstocks such as fish waste that are already being composted in the province are not included in these standards. Leaf and yard waste composting facilities are not currently addressed by these standards. Guidance on the establishment and operation of facilities which are not addressed by these standards will be developed separately by the department.

In general these standards provide guidance and highlight the information requirements for preparing a Certificate of Approval application. Because this type of composting is new in the province a conservative and cautious approach has been adopted which tends to favour environmental protection. This approach may lead to more stringent requirements that could increase the cost of facility development.

There's flexibility in the permitting process that can temper some issues. Compost



COMPOSTING MATTERS



Pisces 100 per cent natural compost material.

facilities handling more than 2,500 tonnes per year of organic waste from municipal sources must be in-vessel systems. Furthermore, provision has been made for very generous set-back distances from a compost facility to various possible receptors. Windrow facilities accepting these types of wastes must be at least 2,400 m away from the nearest residence. For in-vessel facilities, this set-back distance is 1,600 m. All composting pads, including those for windrow composting facilities, must be constructed of an impermeable surface. As in Nova Scotia, provision must be made for a period of indoor curing.

The primary mandate of the environment department in preparing these standards is to ensure that no pollution emanates from composting facilities. It has the unenviable task of trying to develop standards to meet this end whilst at the same time not including measures which could stifle innovation and development.

Brian Drover, an environmental biologist with the department, says, "We're certainly looking forward to the development of centralized and regulated facilities. We anticipate that, in the future, these facilities will receive

the bulk of the municipal solid waste generated in the province, including organic wastes, for processing. At the same time, we recognize that there are opportunities for the development of smaller compost operations in all regions of the province."

Composting programs in Newfoundland and Labrador are starting to grow in number. There a number of backyard composting programs. As well there are examples of centralized composting and this is expected to increase.

Green Bay Waste Authority

The Green Bay Waste Authority is located in north-central Newfoundland. Until recently composting activities have been limited to a pilot program for backyard composting.

Preparations are now underway to begin a composting residential leaf and yard wastes and eventually commercial food waste within the confines of the Green Bay Landfill Site.

The program will include two annual collections of leaf and yard waste from residential properties and segregation of commercial organic material delivered to the site.

Composting is at its simplest. A shallow

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trench has been dug and material deposited within is allowed to decompose. The organic wastes are turned and aerated regularly.

It's anticipated that in the spring of 2004 there will be a good compost base to begin composting of commercial food waste. Commercial wastes include mussel shells, among other things. (See photo this page.)

Other materials are also being stockpiled in preparation for the spring, including sawdust, brush (for chipping) and shellfish. The landfill site is 1.5 kms from the nearest house. The shellfish wastes are currently stored in the farthest corner of the property, away from the administration building and opposite the nearest town.

The Green Bay Waste Landfill site composting pilot project will be very low tech and experimental, due to restrictions in funding and operational expenses.

As Tracey Lynn Boutilier, Waste Management Coordinator, points out, “You need to have pride and patience to see your program through.” A critical factor is a good quality education program.

Pisces Organics

Pisces Products is an example of a relatively small private sector initiative. Located in Portugal Cove it composts about 500 tonnes annually of a variety of crab and fish wastes at a windrow facility. Aged sawdust and peat are used as bulking agents to manufacture the product. Peat is obtained onsite from a bog. Recently the facility has started to receive raw



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chicken manure at a second site. This is being blended with aged sawdust.

The managers have developed and marketed with varying success a bagged product. (See photo.) This market has proved to be quite challenging for them due to cheaper imports from the mainland (i.e., the rest of Canada). They've readjusted what they're manufacturing and are now also producing a product that they blend with peat and topsoil and sell in bulk as a triple mix.

What's critical is that they receive no tip fees for the incoming feedstocks. This means they receive no revenues for the waste management service they provide and must wait and rely on product sales before they receive a return. ♻️

Paul van der Werf is principal of composting and waste management consultancy 2cg, based in London, Ontario. To contact Paul, visit www.2cg.ca