



The Great White Composting North

In the North, there's the kind of social media where people actually speak to each other

Part of composting's inherent beauty is that it's simple. It clearly encompasses the zero waste goal "to emulate sustainable natural cycles." This makes composting particularly easy to implement virtually anywhere.

I've never been to the Northwest Territories, but going there is on one of those to-do lists that middle-agers like to create for themselves. Truth be told, I'm as much interested in painting the North as I am looking forward to seeing its waste management systems.

As large source-separated organics (SSO) programs have proliferated in various parts of the country, particularly in large urban centres, many small and more remote municipalities are being left out. They don't have the obvious economies of scale to viably pay for the types of technologies that larger municipalities can afford, yet they still have the same types of waste diversion goals.

It shouldn't come as a surprise, however, that our northern cousins are passionate about waste management. A March 2014 publication entitled "Feasibility of Centralized Composting in Hay River, Northwest Territories, Canada" starts with the optimistic lament, "Recently, communities ... have expressed a desire to recycle like their southern counterparts."

While the North-South word interplay makes me think that we

by Paul van der Werf

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southerners are viewed with a bit of (probably well deserved) "know-it-all" suspicion, I suspect (hope) this is easily broken down with a little deference and sped up when supplemented with a dollop of (funny) self-deprecation. (Especially when they find out we really don't know everything.)

Regardless, the North's lament embodies the energy needed to investigate not so much what we southerners do, but to see if there is a way that northerners can manage aspects of their environmental performance in a way that suits their own unique place, needs and budget.

Success stories

The City of Yellowknife (population 22,000), perched on Great Slave Lake, in conjunction with the ubiquitous NGO Ecology North, ran a composting pilot project from 2009 to 2014. Rather than focusing on the single-family residential stream, the city started with both the industrial, commercial and institutional (IC&I) stream, and the multi-family stream. (44 per cent of Yellowknifers live in multi-family buildings.) They were able to divert close to 1,000 tonnes of organic waste over the life of the project. A pilot scale windrow-method composting facility was developed at the city's landfill. A key area of research was to gauge interest and participation in the program, as well as to identify barriers and develop strategies for composting in a colder climate.





The composting process in Hay River is approached in the same way as the South, except that the windrow facilities are essentially put to sleep during the winter, with minimal turning or other activity.

“During the initial stages of the Yellowknife Centralized Composting Pilot Project, a key barrier was the belief that Yellowknife’s climate was too cold to support a successful composting program,” says Shannon Ripley, Waste Reduction Specialist with the Northwest Territories Department of Environment and Natural Resources. “However, this myth was quickly dispelled with photos of the compost windrows reaching 50°C when the outdoor temperature was -30°C, and opportunities to see and feel the first batch of Black Gold finished compost.”

As of 2013, this project had saved about 1,000 cubic metres of land-fill space, with a value of about \$144,000, not to mention generating \$7,000 in compost product revenue. In 2013, Yellowknife and Ecology North were recipients of a Federation of Canadian Municipalities (FCM) Sustainable Community award.

Building on this success and an overall modernization of waste management in Yellowknife (which is also switching to an automated cart-based collection system), the city began a staged implementation of a

centralized composting program in November. The program started with curbside collection of SSO in one neighbourhood and within four years will be expanded to all single-family dwellings.

“Another barrier to the development of composting programs in NWT communities is the small population of 43,600 people spread across 33 communities and 1.1 million square kilometres,” says Ripley. “It’s expensive to travel between communities and delivering composting education programs and technical support can be expensive and logistically challenging.”

Believe it or not, some of these challenges or barriers also present opportunities.

“We have tightly-knit social networks, where word-of-mouth and community learning can progress very quickly,” adds Ripley.

It’s the kind of social media where people actually speak to each other.

An example of this is in the southern portion of the Northwest



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Tightly-knit social networks allow word-of-mouth and community learning to advance organics diversion quickly.


Territories in Hay River, the so called “Hub of the North,” which looks wonderfully isolated, hanging on to Great Slave Lake’s southern shore at the mouth of the river.

The aforementioned Ecology North undertook preliminary feasibility desktop research to, among other things, see if it’s possible to include paper (that in less remote communities gets recycled) and can be co-composted with other sources of organic waste, thereby giving the opportunity to divert up to 60 per cent of the waste stream. The research was considerably broader than that. The consultants also investigated the best way to manage the various organic waste streams (e.g., SSO, manure, paper waste) in their town.

Hay River evaluated three possible scenarios: composting poultry manure and paper waste at a poultry farm; composting SSO and paper waste at the town’s landfill site; and, composting of SSO paper and aged chicken manure at a proposed farm training institute. The town ultimately recommended the development of two composting facilities: one

to manage poultry manure directly at the farm, and another to manage SSO at the town’s landfill or another location.

The composting process is approached in the same way as the South, except that the windrow facilities would essentially be put to sleep during the winter, while seeing minimal turning and other activity. Staff are currently working on next steps, including the development of a pilot composting program.

“The outlook for composting in the NWT during the next five years is very bright,” says Ripley. “In addition to the projects already mentioned, small-scale community garden and home composting projects, including some organics collection from local restaurants and grocery stores, are taking root in a number of other NWT communities, including Inuvik and Dél’n’.” 

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