

Hutchinson: Composting On the Road to Sustainability

Ernie Diedrich and Lola Schoenrich

July 2001

Hutchinson's moves towards greater sustainability really began with a two troublesome problems. Eight years ago, the City was spreading solid residue from the Hutchinson wastewater treatment plant onto local agricultural fields. MPCA rules only allowed landspreading at certain times of year, however, and storing the sewage sludge all winter was a problem. At the same time, the City's leaf, brush and grass disposal site was full of weeds and mud and some city residents would complain when the brush pile was burned. Their solution, composting, won Hutchinson an award from the United States Environmental Protection Agency and has led to a heightened awareness of other ways to convert less sustainable "solutions" to real, sustainable ones.

Hutchinson was founded nearly 150 years ago and has since grown to a population of 13,500. It is located in McLeod County, just 55 miles west of Minneapolis and is home to several technology-based firms including 3-M, Hutchinson Manufacturing, as well as Ridgewater Technical College. It is a community used to arriving at solutions and has, in recent years, found a need to pay special attention to the portion of its mission statement that zeroed in on the environment... “We will balance growth of the community and the protection of our natural surroundings.”¹

Dealing with Organic “Waste”

With their own power utility and even the only liquor store, Hutchinson has a decidedly business-like approach to public utilities. The City manager, acting somewhat like Hutchinson’s CEO, saw an opportunity to solve the City’s sewage sludge problem and problems at the yard waste site with composting and went about convincing the City Council and Mayor who would ultimately convince the public.

The plan had four steps. The first was to upgrade the existing yard trimming operation, the second was to promote home composting and grasscycling, the third was to use in-vessel composting to manage the wastewater treatment biosolids, and the final step was to include commercial and residential source-separated organics in the in-vessel composting program.

Yard Waste Composting

Since the State of Minnesota’s 1993 ban on disposing of yard trimmings in landfills, most communities have some sort of program for managing leaves, grass clippings and brush. There is a permit procedure through the Minnesota Pollution Control Agency for yard waste composting sites, and 92 such facilities are permitted. [BioCycle Magazine](#)², however, lists over 430 sites in Minnesota, which means that the vast majority are unregulated and possibly mismanaged. In 1993, the Hutchinson facility was one of these unmanaged sites.

City officials attended a composting seminar put on by Jim McNelly, a composting expert based in Saint Cloud, liked what they heard. Within months, city resources were made available for turning the piles at the yard waste site with a front-end loader, watering them, and managing the

Hiring a local contractor to periodically shred the brush pile was a simple enough procedure. The City did the same for screening the finished compost. The contractor was paid either by the hour or by the ton. The City had always “given away” their compost to residents as a public service, but the consultant told the City that such a program sent a message that the compost had no value. He convinced the Mayor to try selling screened compost and chipped brush, recommending a Saturday test in April before gardening began in earnest. Placing a quarter page add in the local paper stating “free loading” for \$25 per pick-up truck load, the response was outstanding. It was so great that a second front-end loader had to be called in as well as help to manage the traffic that backed up onto the highway. Adding a “scoop and fill” bagging operation, the City brought in over \$4,500 in revenue in only three weekends!

A unique feature of the Hutchinson government that facilitated the composting process was the fact that City department heads met together once a week to discuss mutual problems and engage in problem solving. Rather than purchase a front-end loader in the Public Works Department that would only be used a few hours a week, the Street Department agreed to share its loader and dump trucks to assist the composting operation. Parks would use the compost in gardens, turfgrass and tree planting projects, offsetting revenues within the overall City budget.

The Backyard Composting Program

Once the municipal composting site was refurbished, Jim McNelly, still as a consultant to the City, started the home composting program to reduce the volume of material going into the compost site. The home composting program had several components: public education, compost bin distribution, and grasscycling promotion. McNelly put on composting and “carbon cycling” seminars at schools, garden clubs, and the annual County Environmental Education day for graduating fourth graders held at a County Park. Four styles of compost bins were selected and purchased by the City. To receive a free bin, the householder had to attend a one hour presentation on composting and grasscycling at the High School auditorium. Citizens were also provided five dollar rebate coupons redeemable at local vendors to switch conventional mower blades over to mulching mower blades.

the program paid for itself in only three years due to decreased collection costs.

The Problem with Sewage Sludge

All towns require wastewater treatment and Hutchinson is no different. It built a \$12 million dollar wastewater treatment facility that started operating in late June 1988. It quickly met all of its discharge requirements and had sufficient capacity to meet the city's needs through 2010. The excess activated sludge that is separated from the wastewater during treatment is pumped into storage tanks and subsequently dewatered (either by gravity or with a press that produces a "sludge cake" that is suitable for fertilizing farmlands). But, state Pollution Control Agency rules limited land application to certain times of the year, requiring storage for many months.

Composting of Sewage Sludge

Jim McNelly, President of Naturtech, a composting technology provider, offered one answer to the problem...in-vessel composting. Beginning in February, 1995, NaturTech and Hutchinson used large, mobile closed containers to convert biosolids into safe compost that could be used for gardening as well as building up soils in the area. In 1997, the City decided to discontinue composting the city's wastewater plant's biosolids. Changes in Pollution Control Agency rules regarding land application alleviated some of the storage problems, and the City decided to discontinue composting, more labor intensive than other methods of reducing the volume of the material.

The purchased a new \$2.4 million biosolids treatment facility, completed in 2000. The biosolids were dried in a gas-fired dryer, processed to remove pathogens, compressed and dried, pelletized and applied to City-owned land. In the first month of its operation, the facility had a fire that damaged the facility. It was rebuilt, but, as of September 2001, no date has been set for reopening it. With this uncertainty, the City is still actively working to turn biosolids from the wastewater plant from a problem to an asset.

Composting Household Organic Waste

With the composting equipment sitting unused in 1997, officials in Hutchinson, such as City Manager Garv Plotz, decided that Hutchinson

Agricultural Utilization Research Institute to demonstrate the feasibility of composting organic residuals from local farm sources.

The grant basically funded a pilot community source-separated organics composting program, along with several community programs such as looking at alternative transportation options, bike trails, and investigating wind energy. The pilot program was the first of its kind in the world to successfully collect household organics at the curbside other than yard trimmings for composting in NaturTech's in-vessel composting system. These materials include food scraps, pet waste and non-recyclable paper. The City also collected and processed commercial and institutional organics from schools, lunchrooms, and grocers. 225 households participated in the two-year demonstration, using degradable bags and 90gallon rolling refuse containers, processing an average of one ton of material per day.

The City carefully researched biodegradable plastic bags, and after trying a number of different options, settled on a certified compostable bag, made by Biocorp, a European company.

In 1999, the City decided to take the composting program city-wide, including all 3,780 households. The goal was to double the capacity of the program, and Hutchinson applied for several grants to cover the \$3 million cost of the new facility that would be required. The City received a Capital Assistance Grant for \$1,340,000 from the State Office of Environmental Assistance. The City also applied for a matching grant of \$1,000,000 from the McLeod County Landfill Abatement Fund, which is funded by a County-imposed \$2.00 per ton surcharge on solid waste sent to the private landfill located in the county. The City funded the remaining cost of the program, and it was fully operational in 2001. The 90 gallon residential organics cart participation rate in the summer of 2001 WAS 98%, a resounding success.

Citizen Participation in Decision-Making

There were two citizen advisory groups involved in the Hutchinson composting project. The City formed a Resource Recovery Committee, which was particularly active in developing a cost-effective collection

to a semi, accumulating several loads for transfer to the distant landfill, saving wear and tear on the roads and reducing gasoline use.

The committee has also looked at how to reuse more materials.³ They are progressing nicely with this idea, especially in the reuse of asphalt . Hutchinson is also promoting energy efficiency in people's homes. They are trying to encourage people to replace old furnaces and windows as well as increasing the amount of home insulation to increase energy efficiency.⁴

Is it Economical?

Economically, composting has been very beneficial for Hutchinson. Since the yard waste compost is essentially a rich, organic, and healthy soil, the demand for it is high. The compost is sold by bulk marketing at \$12.00 per cubic yard or by the 40 lb. bag at \$2.50 per bag. Compost from the household organics collection is used on city-owned land, including City parks, offsetting purchased fertilizer costs.

The City used State and County grants, along with City funds, to demonstrate the technical feasibility of their household organics management strategies. As a part of the Office of Environmental Assistance grant, the City had to provide an economic analysis which showed that the composting system would not cost more than the alternative of landfilling, around \$50.00 per ton in 1999 dollars. The State had seen projects fail in the past when they provided grants to communities for mixed waste composting systems that cost between \$65.00 and \$80.00 per ton. Given the changes in federal waste management laws, haulers bypassed the expensive composting programs to send waste to less expensive landfills. This innovative approach to composting showed at least a match of current landfill costs based upon a 20 year amortization schedule.

Obviously the City has benefited from the capital subsidy from the State and McLeod County, and in fact, this capital infusion is what has made the project possible. As the City seeks to increase the size of its composting operation with wastes imported from outside the area, it could be viewed as having an unfair cost advantage over competing private operations that are not subsidized. The same could prove true for the marketing of

Recycling in Hutchinson

Much like the composting project, the recycling programs, give incentives to residents that take part in the process. The City believes that recycling is important to a sustainable society and therefore, it is important to provide incentives to project participants. Recycling is reinforced by a credit to the garbage bill. Collection trucks carry a scanner and residents that set out recyclables two times each month receive the credit. Everyone benefits from this sort of an economy. As of 1999, Hutchinson and St. Louis Park are the only two communities in Minnesota to have this sort of recycling organization⁵. With 65% of the waste stream recycled or composted, Hutchinson counts its recycling and organics composting programs among the City's success stories.

Other Sustainability Elements

Hutchinson has also been actively engaging in several other small projects to make themselves more sustainable. They have developed a traffic advisory board that looks at other forms of transportation such as bicycling by creating an extensive bike trail system throughout the community. Riding a bike is strongly encouraged and this city has one of the largest bike safety organizations in Minnesota. They actively promote bicycle safety and often hand out helmets to community members.⁶ Encouraging bicycle riding, lessens the use of automobiles as the only form of transportation and increases social interaction among community members.

Progress towards Sustainability?

Hutchinson has taken several solid steps towards sustainability. The composting project has taken off and is in the process of being expanded. The bike trails are effective and people are riding on them daily. In general, more attention has been focused on reducing the amount of waste going into landfills and people have become more aware of the connection between wastes and the need to keep the soil's productivity high. In Hutchinson, a few key leaders, like City Manager, Gary Plotz, supported by a diversity of citizen involvement, set the City on the path to greater sustainability. As a result many are committed to ensuring that the City continues to promote progress towards sustainability.