

**FILLMORE COUNTY, MINNESOTA
RESOURCE RECOVERY CENTER
THE MISSING LINK: COMPOSTING**

The Fillmore County Resource Recovery Center (genuine resource recovery, not mass-burn) began operating in September 1987. Fillmore County is a rural county with a population of 20,000, with 12,000 people living in municipalities. Fillmore generates approx 7,200 tons of waste per year. At present one half of the county's waste is going to a landfill in Iowa, about 56 miles away, because the tipping fee is lower at \$12 per ton. The other half of the waste goes to the Fillmore Resource Recovery Center for \$40 per ton.

Videoactive Productions has just produced a 31 minute video on the Fillmore operation in collaboration with Paul Connett and Edie French of the Minneapolis Dept. of Telecommunications. In this video, filmed in February 1989, Paul interviews Norman Craig on the operation of the Center. All aspects of the handling of materials is filmed, and the following report comes from that video. Details for obtaining the video are at the end of this report.

Fillmore County has mandatory source separation. Residents separate their trash into two categories (1) **recyclables** and (2) **garbage**. There are three entry points for all materials taken into the Center. They are:

- Separated recyclables** - Center pays for these materials
- Co-mingled recyclables** - No tip fee
- Mixed garbage** - \$40 ton tip fee

The Center pays a penny a pound for separated glass and paper, and 35¢ per pound for aluminum. The price is low because the Center does not want to compete with private recyclers.

CO-MINGLED RECYCLABLES: These materials are put onto a conveyor belt and are hand separated by disabled and mentally handicapped adults. The items sorted are: Aluminum, Scrap Aluminum (pie plates, etc), Corrugated cardboard/brown paper (baled together), tin cans/steel (sold to a scrap dealer for 6¢ a ton), PET plastic containers, High-density polyethylene - milk, soap and oil containers. A contest the Center ran was to estimate how many plastic milk bottles would make up on ton. Answer: 12,000. Glass - separated into 3 colors (clear, green, brown). Glass is sent to Owens Illinois and is used to make corning ware.

Newspapers - go directly to a shredder for cattle bedding. The Center uses a farm baler which makes a 40-50 lb. bale, that sells for \$1. The Center cannot keep up with the demand for the cattle bedding. When the markets for newspaper are good the Center either sends the baled paper to an insulation company or to a de-inking operation in Chicago. The Center estimates that one bale of shredded paper is equivalent in absorbency to 3 bales of straw. The jury is still out on using newspaper for cattle bedding because of possible contamination by metals in the ink.

Campbell Soup Cans - The Center keeps separate boxes for these soup cans so that the local school district can collect the labels in a scheme that could net the school a van.

MIXED WASTE: The packer trucks deliver the mixed waste to the Center. They estimate that 10% of the waste is rejects (to landfill), 10% recyclables, and 80% for the composting program. The mixed waste is put onto conveyor belts, and after rejects and recyclables (mainly corrugaed cardboard) are removed the waste moves from the conveyor into a shredder. After the shredding process the material is watered down before going to outdoor windrows. A scarab machine runs down the windrow: it turns the pile and aerates it. After composting is complete the material is sent through a screen that has a 1/2 inch mesh. Rejected material (mainly plastic) is sent to the landfill.

Printed on recycled paper, naturally

COMPOST MARKETS: The County is using a lot of the compost for road construction projects. Apple orchards and Christmas tree farms have expressed interest.

LANDFILL COMPARISONS:	Before the Center (1986/1987)	After the Center (1987/1988)
<u>Summer</u>	40 containers went to landfill each month.	14-17 containers went to landfill each month.
<u>Winter</u>	14-19 containers to landfill each month.	4-6 containers to landfill each month.

The Center is designed to handle 30 tons a day, but could take as much as 50 tons per day. At \$40 per ton they are not quite breaking even.

EMPLOYEES: Manager, 2 machine operators, 5 full-time staff on line, and 2 part-time workers. On the mixed recyclable line they have at least 4 full time mentally and physically handicapped adults.

INCINERATION: Fillmore County had been asked to join with Winona and Olmsted Counties in a three-county incinerator project. Fillmore said no to incineration because the tip fees and transportation costs were more than they felt they could afford.

PAUL'S COMMENTS: I was very impressed with the operation and the committment of the people running it. My only reservation is that I wished they had gone one step further and asked residents to use a separate container for clean organics -thus giving the plant four lines instead of three: (1) for separated recyclables, (2) for co-mingled recyclables, (3) for separated organics, (4) for mixed waste. This would allow them to produce two grades of compost, one of which would be suitable for many applications while the other could be reserved for low grade use, such as road sidings and landfill cover.

VIDEO AVAILABLE: W.O.W. No. 15, "Recycling's Missing Link: Fillmore County, Minnesota," is a 31 minute video, available from: Videoactive Productions, Box 322, Route 2, Canton, NY 13617, Telephone 315-386-8797. Available for \$25.

CURBSIDE RECYCLING: In August, 1988, BioCycle ran a four page article written by Norman Craig, the Zoning Administrator, Solid Waste Officer, and Ag Inspector in the Fillmore County Zoning Office. According to Mr. Craig: "The curbside program is an essential part of the composting operation. Without residential and commercial recycling, it would have been necessary to mechanically remove non-compostable materials, which would have pushed costs back into the range of incineration." Mr. Craig also gave a breakdown of the Capital Costs (estimated to the nearest thousand dollars) of Fillmore's Resource Recovery Center. The Minnesota Waste Management Board provided \$351,500 in funding. All capital items to be purchased qualified for the 50% funding.

CAPITAL COSTS FOR THE FILLMORE COUNTY RESOURCE RECOVERY CENTER

Category	Total
Promotional Expenses (Including advertising & recycling literature)	\$ 5,000
Construction-Related Expenses	259,000
Recycling Equipment	84,000
Composting Equipment	180,000
Other Related Equipment	7,000
Consultant's Fees	29,000
Total Capital Costs	\$564,000

An annual subscription to BioCycle is \$46 for 10 issues. Address: Box 351, 18 S. 7th Street, Emmaus, Pa 18149.

Waste Not #43
*A publication of
 Work On Waste USA,
 a non-profit corporation dedicated to the
 promotion of sound resource
 management policy.*

*Annual Subscription Rate: \$25.
 Students & Seniors: \$15
 Consultants &
 for-profit organizations: \$100.*

*Letters, articles and calls from the public
 welcome.*

Paul & Ellen Connett, Editors
 82 Judson Street
 Canton, New York 13617
 (315)379-9200

Printed on recycled paper, naturally