



Saint Paul, Minnesota

23% Waste Reduction Rate in Multi-family Dwellings



Saint Paul, Minnesota, began its multi-family recycling program in 1986. Local ordinance requires that all apartment complexes offer residents recycling services. City-sponsored multi-family recycling services are available to buildings with twelve or more dwelling units. As one of the oldest programs in the United States, it is also one of the most developed. In 1997, over 27,114 units in 1,056 buildings received the recycling service and the program collected 3,418 tons of recyclables, representing a greater than tenfold increase from the 290 tons collected in 1988. In 1997, Saint Paul achieved a multi-family waste diversion rate of 23%, collecting 22 pounds of recyclables per multi-family unit per month.

Program Description

Recycling came to Saint Paul in 1986. The program was established by a not-for-profit neighborhood coalition — the Saint Paul Neighborhood Energy Consortium (NEC). From the start of the program, planners decided to offer on-premises recycling to all city residents, regardless of whether they lived in single-family houses, condominiums, high-rise apartments, or even houseboats.

Originally multi-family properties had to sign up to participate in city recycling programs. In 1992, the program became mandatory, in that all complexes must offer the services. Participation by individual residents is voluntary.

NEC contracts with Super Cycle to provide collection services. The firm collects source-separated recyclables using sets of six ninety-gallon wheeled carts at each recycling station. One recycling station, which receives weekly or every other week pickup, serves up to 100 households.

A key to the success of the program is city-wide uniformity of the program — there is the same set-out system, list of acceptable

items, and instructions for preparation of materials throughout the city. This makes education easier, and it means that a resident who moves does not have to relearn recycling requirements.

Saint Paul's multi-family recycling program is truly a group effort with the city providing the containers, NEC managing education and the contract with the hauler, and Super Cycle doing the collection. NEC works with the manager of each complex to be sure the property manager understands his or her responsibilities (keep containers accessible, clear away snow, provide move-in packages to new tenants), signs a contract with the owners of the complex, and recommends recycling be included in all leases.

Outreach Activities

NEC actively manages the outreach for Saint Paul's multi-family recycling programs. NEC provides educational materials including flyers, posters, displays and leadership for resident

Materials Collected

Newspapers
Telephone books
Mixed paper (including mail, office paper, magazines and catalogs, and paperboard)
Glass Containers
Cans
Corrugated cardboard

mailings. Most educational materials provide basic, clear guidelines and are available in many languages (including English, Spanish, Russian, Cambodian, Hmong, Chinese, Vietnamese, and Somali).

The program provides ongoing feedback to residents — via monthly data on quantity of materials recycled by complex (the hauler is required to provide NEC with monthly pickup information for each account served). These data can be graphed on a poster provided by NEC, and displayed for residents to see. NEC staff also attend tenant meetings to speak about the MFD program upon request.

NEC also encourages residents of MFDs to reuse household items. It has helped complexes set up exchange tables where residents leave items for free retrieval by other residents. NEC also publishes lists of drop-off locations where residents can donate used clothes, furniture, and other reusable items.

Costs/Benefits

Recycling in multi-family dwellings in Saint Paul is financed by a city tax of \$13 per dwelling unit per year, billed to MFD property owners on their property tax bills. In 1996, Saint Paul paid the NEC \$12.17 per household served, NEC in turn paid Super Cycle \$9.81 per household for recycling collection and marketing and used the remaining monies to fund its outreach and educational programs.

The per ton cost of MFD recycling is approximately \$94 in Saint Paul, compared to \$119 per ton for trash (collection averaged \$70 per ton and disposal cost \$49 per ton). Although the per ton cost of the recycling program is greater than the per ton cost of collecting trash, total trash costs are higher because of disposal tip fees. Furthermore, if recycling were eliminated and all discards were collected as trash, conservative estimates indicate that total

costs per multi-family household would essentially be unchanged. In 1996, the total cost of the trash collection and disposal and recycling programs was \$64 for multi-family households; the costs for trash collection and disposal of all waste generated at MFDs would have been at least \$63. Saint Paul has designed a system where recycling programs are delivered at essentially no additional cost to the community, and where significant diversions prolong the life of disposal facilities.

Tips for Replication

- Accept the same materials and use a consistent sorting system for all program participants in your community.
- Produce educational materials using simple graphics.
- Use multiple means of getting the message out — including tenant meetings, newsletters, lease clauses, posters celebrating achievements, and direct mailings.

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Program Summary, 1996

Start Date	1989, reached 100% of MFDs served in 1995
Type of Multi-Family Buildings	All buildings and complexes in the city with 12 or more units
Households Served	27,114
Average Persons per HH Served	1.44
Total Waste Generated (Tons)	15,371
Disposed	11,849
Diverted	3,522
Total Diverted (%)	22.9%
Average Generation (lbs./HH/day)	3.1
Disposed	2.4
Diverted	0.7
Average per ton SWM costs	
Trash Collection*	\$70.50
Trash Disposal	\$49.00
Diversion**	\$93.69
SWM Cost per HH per Year	\$64.39
Disposal*	\$52.22
Diversion**	\$12.17
Estimated Costs per HH per Year without Waste Reduction***	\$63.14

HH = household SWM = solid waste management
Numbers may not add to total due to rounding.

*Ecodata estimated costs based on discussions with private haulers serving the MFD sector in Saint Paul.

**Represents \$12.17 per household fee paid by the city to the Saint Paul NEC.

***In order to estimate what per household costs might have been if Saint Paul had no recycling program, Ecodata assumed that all waste generated would be handled as trash and the marginal collection cost per ton of material that was recycled would be equal to 50% of the per ton trash collection cost in the present system.