



San Jose, California

25% Waste Reduction Rate in Multi-family Dwellings



San Jose, California's multi-family sector recovered 25% by weight of its solid waste in FY97. By contracting with private haulers, the city of San Jose offers weekly collection of more than 26 recyclable materials, including yard trimmings, to every multi-family household in the ethnically diverse city. In order to maximize participation, San Jose offers financial incentives to its haulers and MFD building owners for waste reduction, and the city and its contractors conduct on-going education programs aimed at building managers and residents.

Program Description

Driven by a California law requiring cities to divert 50% of their waste by the year 2000, San Jose added multi-family dwellings to its residential recycling program. It began

yard trimmings pick-up in 1991 and pick up of other recyclables in 1993.

Green Team, a local company, collects trash and recyclables other than yard trimmings from multi-family dwellings. Green Team provides buildings with approximately one set of three (one for each: newspaper, mixed paper, and other recyclables) 96-gallon recycling bins for every 25 households. Building managers usually place bins near dumpsters and in other convenient locations.

Occasionally, when bins are contaminated with trash or the wrong recyclables, the collection driver leaves a sticker on the bin explaining why materials were not collected. The driver also sends a non-collection letter to the building contact, with tips on how to correct the problem.

Yard trimmings account for 66% of material diverted from the multi-family waste stream. Building maintenance staff put yard trimmings either in the street along the curb or in burlap tarps. Crews from one of two

companies bring yard trimmings to two privately owned composting sites. Trimmings are either windrow composted or ground into mulch. Finished compost and mulch are sold or used as soil amendment on farms and city parks.

Outreach Activities

Outreach activities comprise two main components: providing educational and instructional material, and conducting on-site visits. Outreach activities have essentially two audiences: building managers and residents. For managers, Green Team staff provide building managers with tools to help them take an active role in recycling. These include signs, information on volume-based trash fees, model lease agreements incorporating paragraphs

Materials Collected

Newspaper
Corrugated cardboard
Mixed paper (magazines, catalogs, paper bags, telephone books, paperboard, colored and white paper, envelopes, mail, paper egg cartons)
Glass containers
Cans
Juice and milk cartons
Plastic bottles and jugs
Polystyrene packaging
Scrap metals (including aluminum foil and pie pans, metal can lids, small metal appliances, hubcaps, metal pots)
Textiles
Yard trimmings

about recycling, and a service agreement packet containing brochures listing services provided and tips for dealing with contamination.

The city produces all outreach materials, including posters and informational brochures, in English, Spanish, and Vietnamese. In addition, Green Team makes site visits and presentations whenever requested, and puts on recycling carnivals for children. The Environmental Services Department (ESD) runs a recycling customer service line.

Costs/Benefits

The ESD's operating costs for multi-family waste management services include payments to Green Team for trash and recycling services; payments to haulers and processors for yard trimmings collection and composting; landfill fees for trash disposal; billing and customer service; and overhead costs for rent, staff salaries and benefits, administrative support, and supplies. In FY97, these multi-family waste management costs totalled \$11,000,000. Of this, disposal services cost approximately \$6,300,000 and diversion services cost approximately \$4,500,000.

ESD incurred no capital costs for the program, as contractors provide all equipment.

One of the main goals of the San Jose recycling program is to divert trash from the landfill, extending its life. To maximize diversion, ESD charges building owners volume-based fees for trash pick-up and nothing for recyclables pick-up. Building owners with high participation rates save money by reducing their trash. One building complex, for example, saves over \$10,000 in disposal costs per year by recycling 62% of its solid waste.

Tips for Replication

- Involve building management. Programs improve significantly when managers actively promote recycling.
- Educate building owners. Owners can only use services they know about.
- Sell program economics to building owners.
- Keep it simple. If the program is intuitive, higher recovery and participation rates usually result.
- Be persistent. High diversion recycling programs at multi-family homes require energy from recycling coordinators and building managers.
- Reach residents by placing information where the residents are, such as on or near recycling containers.

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Program Summary, FY97

Start Date	Yard trimmings phased in Sept. 1991 to Sept. 1992; other recyclables July 1993
Buildings in Program	3,400 buildings
Type of Multi-Family Buildings	All buildings with 4 households or more, mobile homes, condominiums, and townhouses
Households Served	80,440
Households per Building	2,400 buildings have 4-10 households 650 buildings have 11-50 households 150 buildings have 51-100 households 200 buildings have 101 or more households
Total Waste Generated (Tons)	103,124
Disposed	77,544
Recycled	8,714
Composted	16,866
Total Diverted (%)	25%
Recycled	8%
Composted	16%
Average Generation (lbs./HH/day)	7.0
Disposed	5.3
Recycled	0.6
Composted	1.1
Net Costs per HH per Year*	\$133.55
Disposed	\$77.73
Diverted	\$55.82

HH = household

Note: Numbers may not add to total due to rounding.

*Costs represent the ESD's payments to contractors for disposal and diversion services, landfill tip fees, billing, customer service, overhead costs for rent, staff salaries and benefits, administrative support, and supplies.