

ton Crushed Concrete (HCC).

To keep HCC steadily supplied with concrete rubble, Sylvia Bumstead, Richard's wife, owns and operates Houston Concrete Demolition (HCD). HCD uses a Pettibone Universal "Thumper" to break down concrete at demolition sites. Hydraulic excavators remove the concrete, which is hauled to one of six HCC yards. HCC's portable crushing plants use Cedarapids jaws and Cedarapids-El Jay cones to process the large pieces from HCD.

Other, similar operations

Even smaller contractors have installed their own crushing facilities. Vollers Excavation and Construction (Branchburg, N.J.) added a portable plant to its operations in 1987.

On large excavation jobs, workers take the mobile crusher to the site to handle it there. The clean concrete can be laid right back down as a base. The company's president, Herbert Vollers, prefers the German-made Boehring

crusher to some domestic models. He has, however, retrofitted it with a Caterpillar generator instead of a diesel engine.

As of summer, 1988 (when crushing operations were halted because of local zoning problems), the plant had recycled about 100,000 tons of concrete. Although he still uses more stone than recycled aggregate, Vollers is pleased with the recycled concrete, and even uses his crusher to recycle asphalt.

"We're tickled with the end product," he says. "It's ideal." New Jersey's Somerset County agrees; the county has made Vollers's recycling operation part of its waste management plan!

Similar commercial concrete recyclers have set up operations in West Babylon, N.Y., as well as on the West Coast, in Santa Monica and Sunnyvale, Calif. Videotapes on the subject are available from Cedarapids.

— Kathleen Meade

WHO SAYS APARTMENT DWELLERS WON'T RECYCLE?

A year or two ago, those looking over the apartment house recycling scene might have concluded that those residents don't recycle. Add up the negatives: inconvenient collection locations, extra maintenance work, and renters' attitudes.

But now many tenants are recycling, more from necessity than anything else. In cities all over the country, the disposal crisis has dictated that apartment dwellers separate their newspapers, glass, and cans with the rest of the community.

Programs in New York

New York City tenants know that better than anyone. With help from the local Environmental Action Coalition (EAC), some apartments in the Big Apple have been recycling newspapers since 1984. The city's Department of Sanitation (DOS) now uses two different methods to collect newspa-

pers, glass, and metal from apartments; the EAC continues to supplement that service with private collection.

In late 1986, the DOS started collecting from apartments in Greenwich Village (a neighborhood in Manhattan) as part of a citywide curbside recycling program. Tenants in buildings with 100 units or less tie their newspapers and leave them at the curb; DOS recycling employees collect them on a day that coincides with the regular refuse pickup. Now eight of the city's 59 districts participate in the program, which includes service to more than 250,000 individual units. Parts of Brooklyn, Queens, and Staten Island have begun separating glass and metal as well.

But perhaps the more interesting arm of DOS's program is CAHRP — the Containerized Apartment House Recycling Project. Buildings with 100 or more units receive 1- or 2-cubic-yard containers. Tenants can deposit newspapers (and glass and metal in some buildings) in waste chute

rooms, and maintenance staff collect and load them into the container. EZ-Pak (Galion, Ohio) trucks are used to collect the material at least once a week.

More than 100,000 units are currently served by CAHRP. Last October, the DOS sent more than 400 tons of newspapers to various brokers, and more than 18 tons of metal and glass to an intermediate processing center in East Harlem.

Nonprofits' group approach

Even before the DOS began its municipal operation, the EAC had been collecting from apartments scattered around the city. Under a DOS contract, the nonprofit group works with several private companies, which supply the buildings with containers and collect the materials. Haulers keep profits from the recyclables as their fee.

The EAC's program, serving nearly 40,000 units, fills the gap for buildings that are too large for DOS's curbside program but can't accommodate large containers. Smaller receptacles and newspaper-tying stands are placed in the rooms where tenants normally leave their wastes, and maintenance staff coordinate the materials.

"In most of our apartments, we can significantly reduce compactor repair costs, since too much newspaper is one of the major reasons compactors break down," says an EAC representative. Most of the 160 tons of materials the EAC program collects each month are newspapers.

St. Paul, Seattle, New Jersey follow suit

New York isn't the only city that has turned to its apartment dwellers for recycling help.

A pilot program recently completed by the St. Paul Neighborhood Energy Consortium (NEC) has led to a full-fledged program in the city. Contracted through Supercycle (Minneapolis), the program has placed 90-gallon containers for newspapers, glass, and cans in 10 buildings — eight of which are city-subsidized apartments.

According to the NEC's Patricia Schenk, close ties with maintenance staff and strategically placed containers have led to the program's success. In addition, there appears to be no significant difference in participation or recovery rates from the public housing apartments.

Seattle, meanwhile, is jumping into apartment house recycling with two feet: Not only has the city received a \$25,000 state grant to hire a full-time apartment recycling coordinator, but officials may revise city codes to require that all new multi-unit buildings have a recycling plan before they are built.

New Jersey already has a similar statewide law on the

books. Anyone who constructs a residential building with 25 units or more must make space considerations and accommodations for recycling. With more apartment programs being launched across the state, the Association of New Jersey Environmental Commissions (Mendham, N.J.) has put out two pamphlets: One describes how to plan for recycling in new buildings; the other gives tips on how to establish programs in existing buildings.

Not just for big-city apartments

Although many apartment recycling programs have been spurred by crisis conditions in large cities, smaller cities have been successful with their own programs.

In Marin County, Calif. — near San Francisco — a private hauler has collected from 300 to 400 buildings for more than a year.

Joe Garbarino, president of Marin Recycling (featured on the cover of the July, 1988, issue of *Waste Age*), has found tenants to be eager recyclers. "They care just as much about our county's recycling program as everyone else," he says. "You definitely can't fault them just because they rent. Every one of their cans is filled with paper every week we collect them."

Garbarino uses color-coded SSI Schaeffer cans for collection. A

packer truck picks up all the apartments' newspapers, and the company just designed a new lift-off truck devoted to bottles and cans.

In Mississauga, Ontario, Laidlaw Waste Systems has just begun collecting newspapers, glass, and cans from apartment buildings. Rubbermaid containers hold tenants' glass and cans, while hand carts are provided for newspaper collection. The city pays Laidlaw a per-unit fee — about \$650 (Canadian) for a 100-unit building. According to Mississauga's Wes Vinter, "That's really a fair price. It costs us about the same amount to equip each individual apartment as it does to equip one house with a blue box."

Mississauga's program has tenants — rather than management or haulers — design their recycling systems. "After all, they know the buildings best, and they're doing the separating," Vinter says. "They also are pretty keen to recycle, and they want to get involved." Tenants, therefore, are responsible for seeing that the program is maintained.

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