

THE UNIVERSITY OF VERMONT

Release Date: 10-10-2005

Students Help Town Recycle Mobile Homes

Author: Jon C. Reidel

Email: Jon.Reidel@uvm.edu

Phone: 802/656-8206 **Fax:** (802) 656-3203

While affordable and flexible, the more than 22,000 mobile homes dotting Vermont's hills and hollows have a serious downside: They are one of the few forms of housing that inexorably decrease in value over time, with useful lives often shorter than a 30-year mortgage. Most of them eventually end up in landfills.

Students Erin Makowsky and Kendall Kahl want to change the environmentally damaging practice of dumping entire crushed mobile homes or abandoning them on vacant lots. With help from Dan Baker, lecturer of community development and applied economics, they have developed a way to recycle about a third of the materials in a mobile home and save the home's owner much of the usual \$2,000 cost of disposal.

The students spearheaded a mobile home deconstruction project in the small northwestern town of Alburg that resulted in the removal of five such structures with six more scheduled for the fall and another 11 possibly next year. They hope eventually it will become a national model for removing abandoned mobile homes affordably and with environmental sensitivity.

"This is a major sleeper issue that isn't talked about much, but that is a national problem," says Baker. "Mobile home waste is pervasive and many owners can't afford to dispose of them, so they eventually become expensive eyesores to a community. We think we've found the best way to dispose of them in a cheaper, more environmentally safe way."

With the peak of mobile home popularity in the 1970s and 80s, many of these structures have now become dilapidated and abandoned. According to the Vermont Agency of Natural Resources, as many as 15,000 mobile homes are obsolete in the state. In Alburg, local officials wanted to get rid of a growing number of abandoned mobile homes, but most owners couldn't afford to pay the cost of removal.

"We see this is a widespread problem," says James "Buzz" Surwillo, an environmental analyst with the Agency of Natural Resources who helped on the project. "The students have been phenomenal in bringing together so many different entities. It would be great if other communities followed Alburg's lead. We think it can be sustainable and have widespread application."

The effort got started in earnest when Baker, who also helped Alburg start a farmer's market, received a call from Alburg Revitalization Committee about removing 22 mobile homes. The group, ARC, had already successfully removed 50 junked cars from yards and vacant lots and wanted to expand its efforts to mobile homes.

"In looking at it from an economic development standpoint, we felt that it was hard to encourage new business when there's the appearance that it's a depressed town with a lack of pride," says Monica Greene, ARC's treasurer and mobile home project manager.

Makowsky and Kahl began assembling all the necessary players in the fall of 2004, including local contractors, Alburg residents, ARC, the Department of Environmental Conservation and the university. Their plan, based loosely on a similar removal project conducted by the DEC and Surwillo in Bristol, requires some in-kind donations from local contractors to help defray costs. That wasn't a

problem in Alburg, since two potential contractors were selectmen and another was a local businessman concerned about improving the community's appearance.

The students worked up detailed inventories with photographs of the five mobile homes including year and manufacturer; size and location; interior and exterior conditions; and the types of materials used to build the home. In one report, for example, a mobile home is described as having the perimeter ripped out, exposing insulation and wood studs. The kitchen had linoleum floors and the rest of the floor was carpeted. It went on to list a number of appliances that could possibly be recycled such as a shower/bathtub; stove; two heaters; mirrors, and cabinet doors.

The point of the inventory was to compare the condition of the mobile home to the length of time it took contractors to separate the salvageable metal and prepare the recycled structure for the landfill. Makowsky and Kahl then gave contractors a worksheet as a guideline to record their deconstruction process. It included the time spent per mobile home; techniques used for demolition; equipment and labor; items and weights of recyclable materials; weight of waste per home; absorbed costs; and any recommendations.

As it turned out, contractors were able to easily separate most metal structural components such as siding, roofing and frames with a hydraulic thumb. The cost of disposing a non-recycled mobile home at a landfill is about \$700, compared to \$564 for one with the metal separated and salvaged. This doesn't take into account potential extra revenue if metal is taken to a scrap metal yard, or the "environmental savings" of the space saved at the landfill. "Our study showed that it is possible to recycle metal mobile home parts without a radical change in the demolition process," says Kahl.

Even with the recycling, the in-kind contributions were critical to the financial success of the project. Contractors donated about \$4,200 worth of time and equipment; ARC contributed about \$500 per home; and DEC gave the university a \$2,170 grant. In the end, the mobile home owners, many of whom couldn't afford the \$2,000 removal cost, wound up paying about \$200 each.

Kahl, who is continuing to work on the project despite graduating in May, says six more Alburg mobile homes have been targeted for deconstruction in November. Green said she and other ARC members have talked to a state legislative committee about the project and have received calls from other towns wanting to know how they could make a similar program work in their community.

"To be able to transform a classroom project into a living, workable, statewide model of successful mobile home deconstruction is surreal," Makowski says. "It's exciting to be able to see the work we put into the project relayed into something positive with transferable results."

Contact UVM © 2006 *The University of Vermont - Burlington, VT 05405 - (802) 656-3131*