



# OSWER Innovations Pilot

## *Deconstruction and Building with Reused Materials Training*

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*The Office of Solid Waste and Emergency Response (OSWER) sponsors a series of innovative pilots to test new ideas and strategies for environmental and public health protection. A small amount of money is set aside to fund creative approaches to waste minimization, energy recovery, recycling, land revitalization, and homeland security that maybe replicated across various sectors, industries, communities, and regions. We hope these pilots will pave the way for programmatic and policy recommendations by demonstrating the environmental and economic benefits of creative, innovative approaches to the difficult environmental challenges we face.*

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### **BACKGROUND**

EPA has estimated 92% of the 136 million tons of building-related construction and demolition (C&D) waste is generated in this country per year is from renovation and demolition activities. With the country's buildings rapidly aging and pressure to upgrade rising, this waste stream will only increase. While recycling of C&D debris is an important part of the solution, only 20-30% of C&D waste is currently recycled. Innovative reuse options are needed to preserve even more of the value incorporated in original buildings while saving more energy and producing fewer greenhouse gas emissions.

Deconstruction is defined as "the disassembly of buildings so as to safely and efficiently maximize the reuse and recycling of their materials." While limited salvage is a standard demolition practice, deconstruction aims to increase reuse options by pushing materials salvage beyond the usual windows, doors, and light fixtures to include flooring, siding, roofing, and framing where these materials have retained their value. Economically, reclaimed building materials provide alternatives to full-cost new materials for those that wish to make home repairs affordably and provide a choice for the green building materials consumer for sometimes higher quality older materials in lieu of new materials. The US Green Building Council

LEED™ Rating system "Materials and Resources" category recognizes these benefits and the importance of developing the deconstruction and reuse industry to enable this important aspect of green building.

In a recent survey of the greatest needs to support the deconstruction industry, guidance and support for reuse of materials and business information and development assistance were the top two ranked responses. While deconstruction has been growing, it remains a young industry that has not yet gained wide acceptance. To succeed, deconstruction needs to be developed to the point that industry and policy makers see it as a mainstream and intelligent alternative to demolition.

### **PROJECT APPROACH/DESIGN**

ReCycle North in partnership with Yestermorrow Design/Build School, Penn State University, Austin Habitat for Humanity (HfH), and the Building Materials and Reuse Association will develop a national train-the-trainer program for building deconstruction and the use of reclaimed building materials. The five-day training will be held at least twice in the Spring of 2006 to targeted Habitat for Humanity (HfH) affiliates and related non-profit housing or environmental organizations.

The pilot will develop a formal program that can be transferred to other accredited educational organizations such as community colleges, trade schools, union apprentice programs and university adult education offerings. It will include nationally recognized experts in all facets of deconstruction and reuse, from business issues to technical issues, including the reuse of lumber.

## **INNOVATION**

Currently there is no single source educational program for building deconstruction and materials reuse at an accredited educational institution. Furthermore, the pilot will develop a “learning community” by which participants can continue to interact with each other and the project team to further the effectiveness of the activities over the long run.

## **BENEFITS**

Deconstruction and materials reuse provides environmental benefits by reducing greenhouse gas emissions from landfills and reducing energy and resource consumption by extracting resources from old building materials. The communities where HfH affiliates or other entities develop deconstruction and materials reuse programs will benefit by an increase in recycling of recovered materials, availability of low cost materials, more affordable housing, job creation and a cleaner environment. This project will give HfH affiliates and other nonprofit organizations the knowledge to expand in this area.

## **CONTACTS**

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For additional information, visit the EPA OSWER Innovations web site at: [www.epa.gov/oswer/IWG.htm](http://www.epa.gov/oswer/IWG.htm).

