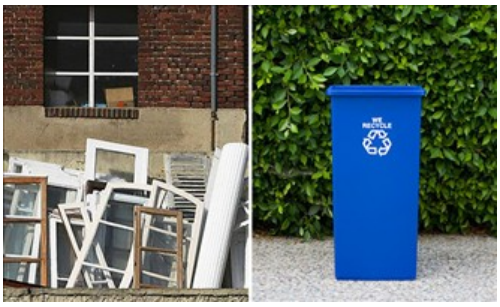
Don't demolish that old house; recycle it

Send less to the landfill and go easy on the environment and your pocketbook.

By Christopher Solomon of MSN Real Estate



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You can recycle your pop can. You can recycle your cellphone. You can even buy a fleece jacket made of recycled plastic bottles. But can you recycle your house?

Increasingly, the answer is yes.

From Florida to Washington state, more people are choosing to "deconstruct" their homes and other buildings.

Deconstruction is the practice of carefully disassembling a building so that its materials — everything from siding to floor joists — can be reused in a new building, while everything else that can be recycled is recycled.

Today, "easily 75% to 90% of a house" can be reused or recycled, says Bob Falk, a research scientist at the Forest Service's USDA Forest Products Laboratory in Madison, Wis., and co-author of "Unbuilding: Salvaging the Architectural Treasures of Unwanted Houses."

A vast problem — and a growing solution

Around 270,000 homes are torn down annually in the U.S., and most of the debris goes to dumps or landfills, Falk says, citing statistics from the Environmental Protection Agency. That's a staggering 1 billion board-feet of timber alone going to the dump — enough to make tens of thousands of homes, he says.

Here's another way to look at it: Just one year's demolition debris is enough to build a wall 30 feet high and 30 feet wide around the entire border of the continental United States, according to the Deconstruction Institute.

Salvaging from old structures to build new ones is hardly new; stone from Rome's Colosseum was plundered to help build St. Peter's Basilica, and salvage stores have been around for decades. But the idea has gotten new wind under its wings in the past several years, as more people care about doing right by the environment — and more governments are watching their landfills fill up. Homeowners are finding that it often pencils out, too.

Hard statistics are elusive, but those in the industry estimate that today only a few thousand buildings are deconstructed annually in the U.S. "We have only scratched the surface on the opportunities to do this," says Falk, who is also president of the board of directors of the Building Materials Reuse Association. "But there are more and more and more people that are doing it every year."

Today, Falk estimates that nationwide there are 1,500 deconstruction contractors and "reuse" stores like those run by Habitat for Humanity, which sell the recycled doors, windows and fixtures.

How to unbuild a house

When a home is demolished, all it takes is two people and perhaps a day or two: One person operates a track hoe while the other drives the debris away in a dump truck.

When a home is deconstructed, on the other hand, a crew of perhaps six workers descends on the house for a week or more. They carefully peel the house apart. What's saved? "Just about everything except the drywall and plaster," says Paul Hughes, founder and president of DeConstruction Services in Fairfax, Va.

Items such as appliances, cabinetry and wood flooring can be reused, Hughes says.

People might be surprised by what's recycled: Asphalt roof shingles can be "crumbed" and mixed with other materials to make road patches. Broken lumber pieces can be ground up and used as wood chips for trails or for mulch. Cinder blocks can be pulverized and used as the base for roads or driveways, or as backfill for other structures, Hughes says.

People also might be surprised at the time it takes. "The first home I took down took 3½ weeks. Now I could easily take that same building down in 3½ days. We've gotten way better," says Dave Bennink, the owner of Bellingham, Wash.-based Re-Use Consulting, which has deconstructed about 550 buildings.

Worried about the environment and about their landfills filling up, cities have encouraged the trend. In Seattle, where a demolition permit is mandatory before razing a house — and where that permit can take weeks to acquire — the city gives an incentive to deconstructors by putting their applications on "the top of the pile" and reducing their wait time, Bennink says.

In San Jose, Calif., the city collects a deposit to ensure that demolition debris stays out of the landfill; a homeowner must prove he has diverted the waste in order to get his money back.

Bennink, who consults around the nation, says he is seeing more interest in deconstruction in Rust Belt cities in the Midwest and Northeast — cities such as Detroit, Buffalo, N.Y., and Youngstown, Ohio — that have both a stock of older, often vacant houses and a crop of unemployed people who need retraining. The deconstruction trade has gotten a big boost from federal stimulus spending, he says, in the form of programs to teach people how to take apart homes.

"There are as many social benefits to doing this as environmental benefits," Bennink says. Remember that home demolition that required only two people? With deconstruction, he says, "We're creating 25 times more jobs than demolition" — a figure Bennink says is based on an analysis he has done. It's not just guys swinging hammers at the job site, but "green-collar jobs" in the reuse stores, in wood shops reconditioning the salvaged wood — even in shops creating furniture from the salvaged material, he says.

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In addition to deconstructing a house, in some cases it makes sense to recycle a house by moving it. I've done this twice, with small wood-frame houses. In one case I got the house for free, the other house cost me $1,000. I hired a professional house mover each time for $3,000, and the new foundations cost $3,000, and $4,000 respectively. Projects such as airport expansions sometimes cause municipal governments to condemn entire neighborhoods. These houses are often in good shape and don't need to be demolished and sent to the landfill.
In my case, the houses I moved went to a site outside the city limits. This meant that they didn't have to meet strict building codes. In most cases a house being moved to a site within the city limits would be considered new construction, and would have to meet current building codes. The houses I moved have hardwood floors and lots of charm. However, the work renovating them has been ongoing. This type of project isn't for everyone.

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Show me the money
So there are lots of feel-good reasons to deconstruct your house. But does it make financial sense for you?

"The short answer is, it all depends. Every single job is different," says Jesse White of the Deconstruction Institute, who is also owner of Sarasota Architectural Salvage in Florida. Some buildings have little to salvage. Others are rich in material. Typically, the most promising homes are older brick or wood-frame homes, because of the value of their brick or, frequently, old-growth timber, White says.

"The other factor is what it costs to throw away" debris, which varies hugely around the country, says the Forest Service's Falk; tipping fees might be $130 a ton in New England and $20 a ton in the South. "In some parts of the country, it may be so cheap to throw things away there's a disincentive to saving materials." (Wonder how many trees you'd save by deconstructing your house, or how much you'd save, on average, in landfill costs? Check out this calculator.)

Still, deconstruction is frequently competitive with straight demolition, those in the deconstruction industry say. The industry's secret weapon? Tax benefits.

Here's how it works:
Let's say you have a house that needs removing. A contractor bids $10,000 to demolish it and junk it, Bennink says. "Now the deconstruction contractor, because their labor is so high, they're spending less at the landfill but more on labor, so maybe they charge $12,500," he says.

The story doesn't end there, however. A homeowner can choose to donate all of the salvaged materials to a nonprofit, such as one of Habitat's stores, and collect a tax deduction based on their value. Let's say the value of all those windows, doors and bricks is $5,000.

The net cost to the owner of the deconstructed home is now $7,500 — plus he got his permit faster because the city expedited it. "Now who's cheaper?" Bennink asks.

If the homeowner instead decides to keep some of the valuable material and use it in his next home, "The benefit can still add up to $5,000 in avoided cost," he says. In one case, Bennink's company saved valuable cedar planking from the doomed home's roof and walls and milled it into cedar paneling for the inside of the new house. When Bennink ran the numbers later, he realized that the material he returned to the homeowner would have cost more new than the entire deconstruction cost.

Says Hughes, "We've had people end up with $60,000 in their pocket after they've paid us off, and the appraiser and the excavator."

One man's recycled happy ending
When Mike Davidson sold his Internet company a few years ago, he decided to build a house. He found a great spot on a bluff in Seattle's Magnolia neighborhood with a commanding view of Puget Sound. There was just one problem: It already had a house on it.

"It was built in 1953," Davidson says. "It was a very uninspired design, not energy-efficient at all, with very small windows so it couldn't take advantage of the view. It was a strange layout, too.

"I hated it," he says.

But he didn't just want to trash it, either. "There was a lot of really good material in the house and on the house. There was old-growth cedar siding," he recalls. "There was some nice stonework.

"And so when I found out that you could deconstruct a house more or less by hand … I thought that was kind of an environmentally great way to go."

So Davidson called in the experts. They took apart the house with startling delicacy; the only real damage was to a single branch on a Japanese maple, he says. (See a cool time-lapse video of Davidson's home being dismantled here.)

Afterward, Davidson donated the 50% of the material that was still intact to the nonprofit RE Store in Seattle; the contractor recycled 40% and took 10% to the dump. The deconstruction cost a bit more than $18,000, plus an additional $7,700 in recycling and dumping fees. But an independent appraiser valued the items he gave away at $18,000.

"It was basically a wash, because it cost a little more to do, but I got a tax refund out of it," Davidson says.

"I would recommend it to anybody."

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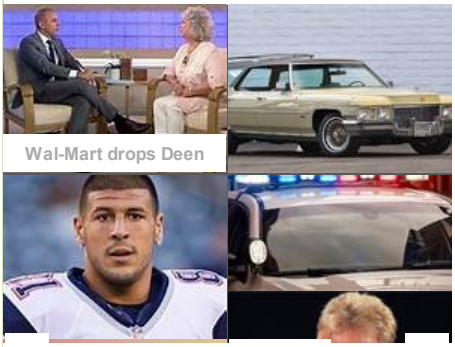

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