

Timber Crisis: Special Report

Timber Supply Troubles Affect Many

Gaining some perspective on the timber supply issue is a little like trying to figure out the stock market. There are many forces at work, some of them real and others mere hype. Everyone seems to have a different opinion and a scarier prediction. And as in the stock market, prices are affected as much by market psychology as by reality. Yet no matter what's driving the lumber market, it is dealers and ultimately builders who pay. As forest industry analysts have predicted, the costs at the lumberyard are climbing in all parts of the country.

- In New England, lumber dealers report that fir plywood, supplied by West Coast mills, is up by roughly \$1.30 per sheet over the last year. According to one mill spokesman, there is a shortage of the thick fir logs used to make the product.
- Pricing on red cedar, says Mike Fritz, vice president of Rugg Lumber in Massachusetts, has risen about 40% since the beginning of the year. Tough winter weather made the coastal growing areas hard to access. But most of the problem, he says, is the shortage of good cedar trees.
- In Virginia, a lumber buyer says finding the product he needs at a reasonable price now requires several phone calls to different mills. The reason: many of the mills he used to work with have either curtailed production or shut down.
- In the West Coast, where there's greater dependency on products from the Northwest, the costs of standard hem-fir framing materials have risen about 25% since the beginning of the year, says Peter Ganahl of Ganahl Lumber Company in southern California.

The timber supply problem results from many issues working together. Unfortunately, says Alberto Goetzl, vice president of economics at the National Forest Products Association (NFPA), "There is fanaticism on all sides."

The best known and most hotly debated problem is preservation. Organizations like the Sierra Club, the Wilderness Society, and the National Wildlife Foundation say untouched forests are necessary for absorbing carbon dioxide, halting global warming, preserving wildlife environments, and, in some cases, saving wetlands. They are also aesthetically pleasing; acres of raw, jagged stumps are not.

On the other side are lumber interests. Dave Hancock, president of Hancock Lumber in Casco, Maine, is a fifth generation lumberman who considers himself a steward of the forest. Trees, in his opinion, are resources that must be carefully managed and

Industry critics claim it is overcutting and export, not disputes over the spotted owl, that close the mills

sustained in order to ensure a supply for future generations. His beliefs, he says, are shared by most members of his industry.

Perhaps nowhere is the conflict between these two groups hotter than in the Pacific Northwest. Many conservation groups are concerned that the Northwest's woods are irresponsibly overcut, partly to provide more logs for export. Timber industry critics claim it is this overcutting and export—not disputes over the spotted owl—that close the mills and choke off domestic supply.

They cite a number of statistics to support this argument. According to the *Forest Industries North American Factbook*, one of every four logs cut within the past two years was sent overseas. About 42% of those logs ended up in Japan, with the balance going to China, Korea and other Pacific Rim countries. The spotted owl, says Jeff Olson of the Wilderness Society, has tied up an estimated 1.5 billion board feet of timber. In 1989, more than 4.3 billion board feet were sent overseas.

Some forest product companies agree with the environmentalists that exports rather than environmental issues are responsible for lost mill jobs. At Temple-Inland Forest Products, officials believe that exporting logs is like exporting jobs, says marketing manager Brenda Elliott. The firm is one of many companies trying to find export markets for milled goods. Other companies, such as Trus Joist International, are working to manufacture wood products that use trees more efficiently and reduce the demand for large, old-growth timber. The industry is learning that trees are not inexhaustible.

In the meantime, the combined pressures of overcutting, exports, environmental activism, and weather problems continue to

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New England Forests Face Threat

New England's forest products industry, like that of the Pacific Northwest, faces troubled times. However, the Northern Forests Study, a recent multi-state study of the forests stretching from the New York Adirondacks across northern New England to Maine, shows that the troubles of the region's lumber producers are rooted in very different forces than those in Western states. The situation is so different, in fact, that in the East, timber companies are actually finding themselves on the same side as environmentalists in their fight to save the forests—at least for now.

Both Eastern and Western forestry industries are suffering from the slow American construction market. However, the similarity in causes stops there. In the West, mills are closing for two other main reasons: because conservationists are complaining that ecological thresholds are being reached, and because lumber and millwork are being exported (see "Timber Supply Troubles Affect Many").

In the East, however, it's not exports or ecological thresholds, but rising real estate values that lumber company owners complain about.

Rising land prices have two effects. First, high prices make it tempting for lumber companies to sell their most attractive land. This they have done in small patches. More seriously, however, rising land values have made New England's lumber companies—most of which have been stable, continuous operations for over a hundred years—attractive targets for corporate takeovers.

This threat was made all too real in 1988, when Sir James Goldsmith, a London-based corporate takeover specialist, gobbled up Diamond International, a lumber company that owned a million acres stretching across eastern Vermont, northern New Hampshire, and western Maine. Goldsmith promptly liquidated the million acres, doubling his money overnight. About 800,000 acres were bought by other lumber companies, but much of the rest was bought by developers. The developers in turn sold some of that as subdivisions, doubling their money overnight.

The successive sales took roughly 100,000 acres out of lumber production. But more importantly, in a single swoop

the Diamond land sale, as it came to be known, roughly tripled the value of the far northern New England real estate. The high prices generated by such speculative sales mean that even when other lumber companies buy liquidated timberland, it comes at tremendous cost.

For instance, Georgia-Pacific recently bought out Great Northern Nekoosa, obtaining over 2 million acres. This cost Georgia-Pacific \$5 billion, much of it borrowed. This debt load may put additional pressure on Georgia-Pacific to sell part of the land, further accelerating the cycle.

This combined threat of the corporate buyout and the rising land values has solidified, at least temporarily, a shaky alliance between environmentalists and foresters in New England. According to Charlie Neibling, executive director of the New Hampshire Timber Owners Association, the cooperation is in part a continuation of "a long history of land-use planning by consensus [in New England], as exemplified by the planning process used in the White Mountain National Forest."

Ironically, however, the Northern Forests Study that has drawn conservationists and lumber companies together carries the potential to eventually split them apart. For now, the two elements have united tentatively against a common enemy: the quick development of timberland. But as the New England states seek a way to preserve the rural character of that land, the environmentalists and the lumber companies may find that their differences outweigh their common interests.

Nevertheless, the situation is still much less polarized in New England than in the Northwest. Neibling remains optimistic that some sort of solution can be worked out to keep what he calls "the working forest."

"It's important to balance the public interest with private property rights," he says. "We've shown that we can have reasonably well-managed private woodlands that are open to public recreation. There's no question there's more recognition of that here than out in the Northwest right now." If that recognition can continue, both timber production and open space might be saved.

—David Dobbs

IN BRIEF

Millions Awarded in Formaldehyde Suit

A Centralia, Mo., jury has awarded \$203,000 in actual damages and \$16 million in punitive damages to a family of five who suffered from exposure to formaldehyde which outgassed from particleboard installed in their home. According to a story in *Energy Design Update*, the court awards were judged against the manufacturer of the particleboard. Out-of-court settlements beyond these figures included an additional \$100,000 from the builder and lumber distributor, who were codefendants in the suit. The presence of formaldehyde was linked to serious, potentially long-lasting health problems experienced by the family. The formaldehyde levels measured in the house were as much as 100 times the ASHRAE recommended level of 0.1 ppm. The case will be appealed. ■

Top Ten Builder Concerns

According to NAHB's bi-monthly survey of state and local home builders associations, impact fees topped the list of problems facing our nation's home builders. The other items on the top ten list included: Worker's compensation, development costs, wetlands, development exactions/land dedications, development approval process, affordable housing, infrastructure financing, growth/no-growth sentiments, and density limitations.

Builders noted that areas of concern for 1990s may be: the availability of sewers and water, storm water management, groundwater protection, solid waste management, mortgage financing, and enforcement of OSHA's Hazard Communication Standards. ■

Cashing In on Defunct Savings and Loans

Due to the collapse of many savings and loan institutions last year, the federal government is saddled with an enormous number of unfinished construction projects and they need qualified contractors to pick up the pieces. Under the Financial Institutions Reform and Recovery Enforcement Act of 1989, the Resolution Trust Corporation (RTC) was formed to oversee completion of the projects. The RTC is now registering contractors—including GCs, subs, A/E firms, property managers, and construction consultant—for possible hire to complete these projects. To qualify you must disclose credit sources and any previous involvement you have had with an S&L. Contact the RTC at 550 17th St. NW, Washington, DC 20429; 202/416-4687. ■

Radon Update: High New England Levels Confirmed

Recent studies performed by the Environmental Protection Agency (EPA) and individual states show the New England states to have high levels of radon, with New Hampshire and Maine topping the list. The studies were done in response to rising fears about high levels of the radioactive gas. When present at levels of 4 pCi/L or more—what the EPA called the "action level"—radon has been linked to lung cancer. The EPA estimates that someone exposed to this level of radon runs the same health risk as someone who smokes half a pack of cigarettes a day. The EPA claims that radon causes up to

75,000 of the nation's 300,000 lung cancer deaths each year.

Concern about radon has been high in New England for some time because one source of the gas—decaying radioactive elements present in granite and other rock—is so common here. The recent surveys confirmed these fears, finding a significant percentage of homes exceeding action levels in every state. Specifically, the New England states rank as follows:

State	Percentage of homes with more than 4 pCi/L air
Connecticut	15% to 20%
Vermont	15% to 20%
Rhode Island	20% to 25%
Massachusetts	20% to 25%
Maine	25%+
New Hampshire	27%

These figures have prompted some attempts at the state level to pass radon-related legislation. Most of these legislative efforts have failed. Of the New England states, so far only Maine regulates its testing and mitigation businesses. (Testing and mitigation businesses in Maine are required to register with the state.) Legislation proposing regulations requiring radon warnings in purchase-sale agreements or mitigation measures during construction recently met defeat

in Massachusetts and New Hampshire. The building and business lobbies have opposed such legislation, and in a time when builders are pressed, state legislators seem hesitant to add further requirements.

The EPA, has taken two significant actions this year. First, it is developing a "Proposed Model Standards and Techniques for Control of Radon in New Buildings" document. These standards will enable model codes or local jurisdictions to include radon-related features in new construction codes, if choose to do so.

In addition, the EPA this spring distributed a total of \$800,000 in grants to the New England states to help them develop radon education and mitigation programs. This influx of money should sharpen public awareness of radon dangers. This, in turn, could lead to increased pressure for regulatory legislation that would affect builders.

The more immediate effect of the EPA grants is to strengthen state radon offices, making it easier to get information about radon. Builders can call their state radon offices or the EPA regional office listed below. These offices can supply the EPA's booklet "Radon-Resistant Residential New Construction," as well as answer questions about current legislation and regulations regarding builders and radon. ■

Radon Information by State

Connecticut:	203/566-3122
Rhode Island:	401/277-2438
Massachusetts:	413/586-7525
Maine:	207/289-3826
New Hampshire:	603/271-4588
Vermont:	802/828-2886
EPA (Boston):	617/565-3234 or 617/565-4502

Carpal Tunnel Syndrome: It's All in the Wrist

"I'd get pins and needles in my right hand at night. My first doctor thought it was something in my shoulder. They fiddled with that, but it didn't help. So I did less heavy work. But over the years it got progressively worse, until at night I had a burning sensation all the way up to my elbow. I couldn't sleep. Near the end I couldn't pick things up. I couldn't hold a hammer or twist a screwdriver. I said, 'This is it. I got to get it done.'"

Nantucket carpenter Allen Holgate is only one of hundreds of carpenters who have suffered from "carpal tunnel syndrome," an injury that results from repetitive motion. It can lead to an almost paralyzing numbness and weakness of the hand. Holgate was lucky. Since having surgery in early 1989, he has regained almost full strength in his hand and is back at work. But other carpenters have been less fortunate. Some have become so weak and clumsy with one or both hands that they have had to give up the trade.

Workers comp data from the Bureau of Labor Statistics suggests that each year some 15,000 to 20,000 people miss at least a few days of work because of carpal tunnel syndrome. Many more cases doubtless go undiagnosed. Most sufferers work in

manufacturing jobs. But a considerable number are carpenters.

Carpal tunnel syndrome develops when overwork causes the flexor tendons that pass through the wrist's carpal tunnel—a narrow passage surrounded by the wrist's many bones and ligaments—to inflame. This inflammation puts pressure on the median nerve, which supplies the thumb and the first three fingers. If this pressure goes unrelieved, the sufferer loses first sensation and then strength and control of those digits.

Early signs include pain, numbness, and tingling in hand or forearm, usually first felt at night. Gradually the pain, numbness, and soreness worsen. The grip weakens. You start dropping things. Eventually, the large muscle of the thumb starts to shrivel—a sign that permanent nerve damage is occurring.

Dr. Linda Morse, chief of occupational medicine at the Santa Clara Valley Medical Center in California, says that carpenters are at especially high risk because their work frequently combines the syndrome's three main risk factors: prolonged gripping, repetitive flexing of the fingers or hand, and vibration. Hammering, for instance, combines prolonged gripping with repetitive movement, while

repeated cutting with a circular saw combines all three factors. These movements can also cause tendonitis of the forearm, further aggravating the problem.

So what do you do if you think you have carpal tunnel syndrome?

"Don't be macho," says Dr. Morse. "The easiest time to treat this is in the first few weeks." Early treatment can prevent further nerve damage and the need for surgery. Morse suggests going to a sports medicine clinic or other clinic staffed by specialists in physical medicine and rehabilitation.

Mild cases sometimes respond to simple measures such as stretching exercises, wearing vibration-dampening gloves, or using vibration-dampening grips on tools. Morse recommends stopping every hour to gently rotate your wrists and arms around in different directions to increase circulation and relieve muscular tension.

Another simple stretch, recommended by occupational therapist Carol Burns of Colorado Springs, Colo., involves using one hand to gently flex backward the fingers, palm, and wrist of the other. The key, says Burns, is to bend back the straightened fingers before letting the wrist roll back; this prevents the wrist

Timber Supply Troubles,
continued from previous page

hurt lumber supply and the workers of the forest industry. A steady stream of shut-downs and curtailments plagues Northwestern mills, where supply decks are down from the usual one or two years' worth to a matter of months or days' worth.

Paul F. Ehinger, a forest products consultant in Eugene, Oregon, tracks the closings at mills in Idaho, Washington, and Oregon. Since January of 1988, 30 sawmills have called it quits. An additional 16 panel plants have folded. Closures in northern California are also significant, according to Ehinger.

Southern lumber supplies, though less pressed, are also beginning to feel the effects of these forces. Ron Willis, export markets manager for the Southern Forest Products Association, says that preservation efforts in the region are beginning to affect supply. In addition, problems in the Northwest are causing an increasing amount of southern yellow pine product to head west, according to officials at Temple-Inland's Texas operation.

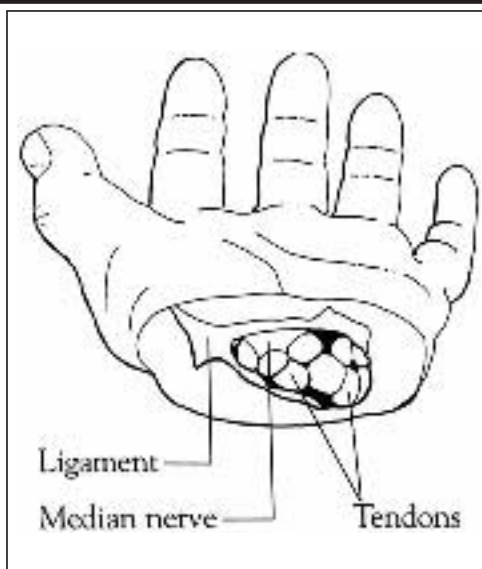
And, as every builder knows, lumber quality is dropping.

"Wood is never as good as it used to be, particularly if you're paying more for it," says Mark Rasmussen, an analyst with Timber Data Company in Eugene, Oregon. Rasmussen says the days of unlimited supplies of thick, clear logs are over. He cites a particular dearth of "architectural quality lumber," the clear, dense, wide-dimension boards and beams valued in high-end construction and trim work.

The recent combined upsurge in prices and decrease in lumber quality will likely continue if the forces driving them aren't checked. Clearly, problems would be postponed if log exports were banned or if the national forests were opened up for cutting. However, the problem will likely require solutions more complex than these.

Until they are found, making quality homes for reasonable prices will become yet more complicated as builders struggle to cope with changing quality standards, higher prices, and engineered building products.

—Wendy Talarico



Carpal tunnel syndrome develops when inflamed tendons press the median nerve up against the ligaments and bones forming the carpal tunnel, which runs through the wrist.

from hyperflexing and causing further problems.

Padded, fingerless bicycling gloves (Spenco, 7501 Bosque Blvd., Waco, Texas 76710; 800/877-3626, or any bike shop.) or self-moldable, vibration-dampening tool grips (available from Hold-It, Inc., P.O. Box 611391, Port Huron, MI 48061-1391; 313/984-4213) can help reduce both vibration and the amount of effort involved in gripping a tool. Other products can be found in Best's Safety Directory (A.M. Best Co., Oldwick, NJ 08858; 201/439-2200).

If such simple measures fail, further steps might include wearing a splint at night and on the job; learning new ways to perform the same tasks; icing the wrist; taking heavy doses of aspirin; receiving cortisone injections to reduce inflammation; or

taking some time off.

A case that doesn't respond to these measures or advances to the point of muscle degradation may require surgery. Hand surgeon Steven Stuchin of New York's Hospital for Joint Surgery says that surgery will often halt the syndrome's progress and it can restore any function already lost. "Unfortunately, you can't always tell how much damage is permanent and how much can be relieved," says Stuchin.

For this reason, and because nerve damage can be irreversible, health care providers stress the importance of not ignoring wrist or hand soreness if it persists for more than a few weeks. To do so, they say, is to risk the carpenter's most important tools—his or her hands.

—David Dobbs

Backflow: A Health Hazard?

Most of us think of our water supply as a one-way street: fresh water comes out of faucets and spigots, and nothing goes back down those pipes.

However, backflow—the movement of contaminated water backwards into the supply system—does occur. Generally, backflow is due to a drop in supply pressure, which creates a reverse vacuum and a temporary reverse in direction of water flow. And this, say public safety officers and utilities, can present a serious health hazard if caustic chemicals or sewage is pulled back into the supply system.

According to Stuart Asay, executive director of the American Society of Sanitary Engineering, this is precisely what happened in Roanoke, Va., a few years ago, when backflow pulled pesticides into the municipal water system. An exterminator working on a suburban lawn was using the client's garden hose to power his pesticide sprayer. Unfortunately, the water utility was doing a main repair at the same time. The resulting drop in the main's pressure pulled chlorodane—an oil-based insecticide—back through the house's plumbing system and into the neighborhood water supply.

As a result, says Asay, "the water utility had to completely replace the plumbing and all the water-related appliances in 19 or 20 households." With lawsuits the cost was over 60 million dollars.

This scenario, says Asay, is repeated both within households and in larger municipal supplies. On a larger scale, undetected backflow at industrial sites can pull chemical or other industrial wastes into public water supplies.

Despite these dangers, backflow has traditionally received little attention from regulators, and many industrial sites and most homes have no backflow prevention devices. That's why public health officials, plumbing industry representatives, and water utilities are trying to get more cities and states to require backflow prevention devices—fairly simple double check-valves—at all water meters and public supply/private system interfaces.

The problem, as usual, is cost. A single end-fixture add-on costs about \$5 to \$10; outfitting an entire home, including devices at

the water meter, on one or two wall spigots, the kitchen sink, and one or two other sites (such as washer connections), can cost close to \$100, says Asay. Industrial sites can cost many times that.

These costs, along with a lack of public awareness, have made it stiff going for backflow prevention advocates, says John Schweizer, editor of *Contractor* magazine, a leading plumbing industry journal. "It's primarily a state-by-state issue," says Schweizer. And in most states, according to a recent article in *Contractor*, legislation is either non-existing or poorly enforced. The magazine describes the history of backflow prevention in Des Plaines, Ill., where a city

The water utility had to replace the plumbing and all the water-related appliances in 19 or 20 households.

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ordinance on the books since 1981 requiring backflow prevention at high-risk commercial properties received no enforcement funding until 1988, when the state of Illinois began applying pressure on water purveyors to implement backflow prevention programs.

Backflow probably won't become a big issue for residential builders unless backflow prevention advocates manage to get such devices specifically put into the appropriate model codes. The Uniform Plumbing Code, for instance, presently says only that "The plumbing and draining system... shall be maintained in a sanitary and safe operating condition by the owner or his agent." If backflow prevention advocates succeed in making the code terms "sanitary and safe" include backflow prevention, then builders and remodelers—as agents of the owners—may find themselves faced with the necessity of preventing backflow. ■

Parts of this story were adapted with permission from Contractor magazine's February, 1990 issue.

NKBA Survey Tallies Customers' K&B Preferences

Although there aren't many surprises in the materials that went into last year's kitchens and baths, the National Kitchen and Bath Association's 1990 survey of their dealer members does show the strength of products that go beyond basic cooking and bathing. The survey was sent to 1,000 dealers; 39% responded. Here are some of the highlights:

Baths. NKBA members installed custom cabinets in more than half the bathrooms they did. But whether custom, semi-custom, or stock, 70% of these vanities and storage cabinets were wood; the remainder were laminate. Materials choice in vanity tops favored solid surfacing (34.5%), with laminate close behind (32.5%), and cultured marble (17%) and tile (9%) trailing. There was very little contest when it came to choice of flooring: Most bathroom floors were either ceramic tile or vinyl (used 56% and 42.5%, respectively).

Expensive extras were not necessarily limited to a few upper-end remodels. Nearly half the bathroom jobs by these NKBA dealers included a whirlpool tub (48.5%). At the same time, almost half the jobs accommodated the busy schedules of two working people: A separate tub and shower were included in 41% of the jobs, while 43.5% had more than one lavatory.

Make-up/grooming centers

topped the list of bathroom amenities most frequently installed by the sampled dealers (82.5%), with customized storage areas a close second (73%). Less popular, but making their marks, were bidets and exercise areas (both 15.5%), and steam showers (14.5%).

And what was the average size of the bathrooms the design respondents installed? Most popular were baths between 35 and 75 square feet (33%), followed by 75 to 100 square feet (32.5%), and 100 to 150 square feet (18.5%). The average cost to the customer for a bathroom was \$8,642. That selling price was down from the \$9,749 cost last year.

Kitchens. Many of the same consumer trends were shown in the kitchen. Custom cabinets topped the list (64%) over stock and semi-custom. Of these, traditional style cabinetry far outstripped Euro/contemporary (71% to 20%). Again, wood was the number one choice (used 87% of the time), with laminates a distant second (11.5%).

The choice of kitchen floors was certainly no surprise either: Vinyl was the most frequently used (67% of the jobs), followed by ceramic tile (24%). On the other horizontal surface—counters—laminates remained in the dominant position (56.5%), trailed by solid surfacing (32%) and tile (9%).

Most kitchens included a microwave (91%), a garbage disposal (83%), and built-in appliances (78%). But more surprising was the showing for separate table and chairs (63%), islands (47%), planning centers (34%), and trash compactors (38%). Dealers included more than one sink in 22% of their kitchen jobs.

The top kitchen amenities most frequently installed by the NKBA members, included lazy susans (92%), pull-out shelves (84%), tilt-down sink fronts (59%), appliance garages (57%), and pantries (54%). Less than half the jobs included spice racks (49%), video/stereo/TV centers (39%), and cutlery dividers (37%).

Most of the kitchens were similar in size: Sixty-nine percent were between 150 and 300 square feet, while 18% were 300 to 400 square feet in size. On the average they cost the consumer \$17,420.

This year, the NKBA projects that 5.9 million will be built or remodeled—up 10% from 1989. New construction will account for 1.4 million or 24%, while remodeling will involve 4.5 million kitchens or 76% of the jobs.

When it comes to bathrooms, the NKBA is predicting 8 million will be built or remodeled—a 5.5% increase over last year. Of that, they are projecting 2.7 million or 34% will be a part of new construction, while 5.3 million or 66% will remodels. ■

A wide range of business management functions and estimating calculations can be done with the Competitive Edge, a software program for IBM computers. Contact Builders Marketing and Management Service, Inc., Crown Colony Park, 700 Congress St., 203 B, Quincy, MA 02169; 617/773-1155.

Integrate wood-frame engineering programs and CADD technology with ICG-II, a design-oriented building software from Integrated Computer Graphics, One Buckhead Plaza, 3060 Peachtree Road, Ste. 800, Atlanta, GA 30305; 404/233-6383.

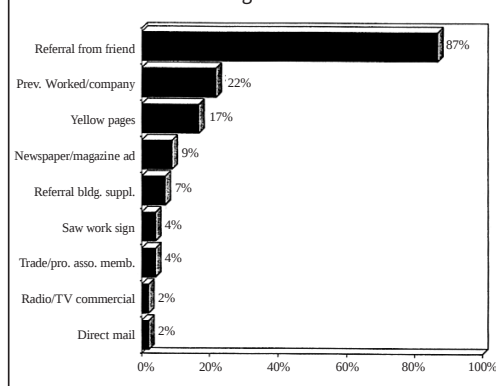
Select pumps, shell and tube heat exchangers, tanks and pressure boosters with TacoNet Software Library. Contact Taco, Inc., 1160 Cranston St. Cranston, RI 02920; 401/942-8000.

Five different construction cost databases are now available in a stand-alone versions from R.S. Means. Contact R.S. Means, 100 Construction Plaza, Kingston, MA 02364; 617/585-7880.



Computer Bytes:

Methods used in selecting a remodeling contractor



Eighty seven percent of consumers responding to a 1989 NAHB survey cited "referral from a friend" as the method they used when looking for a remodeling contractor. Those who knew of the remodeling company's work or had hired them once already accounted for 22% of a contractor's referrals, while direct mail, at the bottom of the list, appealed to only 2% of those choosing a remodeling contractor.

Condos Won't Go Au Natural

When the PST Corporation in Westport, Conn., couldn't draw buyers to its proposed 42-unit condominium project, it threw caution and clothes to the wind by offering a "clothing optional recreation area." As described in the *Hartford Courant*, the clothing-optional alternative, which would have required approval by the condo association at a later date, would have allowed the condo's members to go au natural in a recreation area that included a swimming pool, sauna, hot tub, and pool. Brochures which

described this proposed alternative development were distributed to "naturalist" organizations.

Douglas Nelkin, the New Haven marketing consultant who unveiled the idea, told the *Courant* that such clothing-optional areas are popular in California. But it didn't fly in Connecticut. Connecticut's building market and weather being what they are, the naked truth of the matter is that the idea didn't draw enough buyers to the proposed project to make it go. ■

Mason of Invention



The mason injects repointing mortar in joints that have been prepared with a grinder.

Masonry contractor Charles Partridge says the inspiration for his invention, the "Thin-Line Pump," came straight from the job site.

"I've grouted a million bricks with a grout bag. My right arm had a 20-inch bicep. I figured there had to be a better way."

Tinkering for ten years, Partridge has now perfected a pump that will push mixed mortar through a 50-foot hose. The mortar comes out a 3/8-inch nozzle. After a mason applies the mortar and it is "thumb-print dry," another mason follows and strikes the joint.

Using the pump means you can eliminate the hod carrier. And it makes the mason's work much easier too. Normally, masons must have mortar just the right consistency when they're using a slick and hawk. (A slick is the thin-bladed pointing tool, and the hawk is the flat, square tool used to hold the mortar.) The mortar must hang on to the slick long enough for the slick to transfer the mortar into the joint.



After the applied mortar is partially dry, a second mason comes along and strikes the joint.

But with Partridge's pump, that is no longer a concern. You put the mortar right in the joint, and a rheostat lets you control the flow.

You can use standard mortar with Partridge's pump too. There are no secret ingredients: 2 parts sand, 1 cement, and 1/2 lime. You vary the strength by using different types of cement. Using type N cement in the 2 1/1 1/2 mix gives you a 750-psi mortar, while using Portland cement gives you a 3,500-psi mortar. You can go down to 300 or 500 psi by using

more lime—a plus in restoration work.

The pump can make repointing a large masonry building child's play. Partridge says contractors can crank out 1,400 square feet a day of 1/2-inch-deep joints. In the West contractors setting 1/2-inch-thick Z-brick or R-brick by hand can also speed production. The pump sells for \$3,400. You can contact Partridge at Thin-Line Pump, Box 502, Acme, MI 49610; 616/258-2692. ■

Tax Talk:

What You Should Know About Depreciation

The word "depreciation" has a special meaning for tax purposes. It is simply the amount of the cost of a fixed asset that can be deducted each year until the entire cost of the fixed asset has been deducted.

This definition usually answers the most common questions asked about depreciation. No, land cannot be depreciated. But all other fixed assets are entitled to be depreciated. The number of years over which an asset can be written off depends on the class of the property. The rules are the same for new or used property.

Here are the important classes, together with the years to write

off and the property covered.

When dealing with real estate, you must be careful to clearly identify property that might be entitled to a shorter-year class. In general, items that can be removed without damaging the real estate are usually in the seven-year class. Also, when you install equipment, the cost of wiring the equipment and other costs to make it operational can be written off using the same number of years as is used for the equipment. ■

Irving Blackman, CPA, J.D., is with Blackman, Kallick, and Bartelstein, 300 South Riverside Plaza, Chicago, IL 60606.

Class	Property Covered
Five-year	Most vehicles: autos, trucks, buses Data handling equipment: typewriters, calculators, adding machines, and copiers. Construction equipment
Seven-year	Office furniture, desks, files, safes, and fixtures. Equipment, including communications equipment Assets used in recreation
15-year	Land improvement: sidewalks, roads, fences, landscaping
27.5-year	Residential property, including leasehold improvements
31.5-year	Commercial property, including leasehold improvements

Payback Varies on Home Improvements

Professionally done remodeling is unlikely to make money for homeowners about to sell their homes, but some improvements will repay a hefty percentage of the cost, a survey reports in *Practical Homeowner* magazine.

For anyone considering a move, the best investment remains the simplest: new interior paint, wallpaper, and carpeting. According to the magazine's panel of professional appraisers in 24 cities, the interior facelift returns 82% the first year. After five years, however, the payback declines to 43% (see chart).

Kitchens and baths paid healthy dividends. Three kitchens of varying levels of quality finished among the top-rated projects, as did three baths. Among bath projects, only a conversion of a bedroom to a master bath failed to finish high. Appraisers said the loss of a bedroom actually lowered the value of the house in some markets.

Failing to return high percentages were big-ticket remodels—a family room addition and a master suite addition. But several appraisers said the addi-

tions, if designed to blend with the architecture and built with quality materials, had the potential to increase in value as the homes appreciate.

One factor that figured into the payback was the sagging real estate market in many areas,

especially the mid-Atlantic and Northeast. All but two appraisers said they were working in a buyers market. In those markets, they said, remodeled kitchens and baths were likely to speed a sale if not return all of the homeowners' costs. ■

Top Projects	Cost	1-Year Return(%)	5-Year Return(%)
Interior Facelift	\$5,305	82%	43%
Island Kitchen—Standard	8,363	73	57
Fireplace Addition	2,234	71	65
Adding a Bath	6,800	71	62
Bathroom Renovation—Deluxe	5,420	70	59
Bathroom Renovation—Standard	3,625	70	55
Kitchen Facelift	6,825	70	51
Attic Conversion to Bedroom	5,375	63	48
Hardwood Flooring	3,675	63	51
Island Kitchen—Deluxe	18,440	63	50
Deck Addition	3,675	63	48
Landscaping	5,240	60	57
Attached 1-Car Garage	7,635	53	48