

# IN THE NEWS

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## Cement Shortage Rains on Home Building Parade

China's heavy buy orders have left U.S. ready-mix plants waiting for their ships to come in

**T**he red-hot home-building industry cooled off only slightly in late spring, as buyer demand stayed strong despite small up-ticks in mortgage rates. But the rosy picture was marred by high prices and scarcities in the market for basic materials. With steel and wood prices already a concern, spring brought new worries: surging fuel prices and a sudden, critical interruption in the supply of cement.

If oil prices stay high, rising trans-

portation costs will put pressure on every U.S. industry. But for U.S. builders, the cement shortage poses a more immediate concern. Starting in Florida in April, spreading into Atlantic and Gulf Coast states by May, and reaching into some heartland states by June, shortages of concrete have idled ready-mix workers and wreaked havoc on construction schedules.

**Why now?** A report from Portland Cement Association economist Ed Sullivan identified several root causes for the cement shortage. Mild weather kept the pace of construction strong through winter and spring, drawing down cement stockpiles. Stepped-up

purchases by China, whose booming economy has tapped out that country's sizable domestic cement production capacity, drew off a growing proportion of the global cement supply. (Leaders in China are pushing massive development projects as the country prepares to host the 2008 Olympics.) And a scarcity of global shipping created a critical bottleneck. European and South American producers can make enough cement to satisfy the most pressing U.S. import needs, but ships that previously carried that trade have switched to Pacific routes, where the heavy Chinese import demand has

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## Creating a Wetland Bank, Builder Faces a Tough Slog



A former wooded upland in Michigan is now a protected marsh, in a plan to create a wetland mitigation bank for builders and developers.

**I**f you think it's hard to get a permit to destroy a wetland, try getting permission to make one. That's what Michigan builder Todd Bennett wants to do: Take the trees off a 160-acre parcel of wooded upland, excavate the sandy soil for fill, expose the water table, and populate the moist result with wetland plants and animals. The final product would be a thriving wetland environment that could serve as a "wetland mitigation bank," selling mitigation credits to builders and developers whose environmental permits require them to replace the wetlands destroyed by their work.

"Instead of builders running around building a one-acre wetland here, a half-acre there, to replace a little spot they graded for a driveway or something," Bennett explains, "we take a large area and turn it into a big marsh,

where you have more wetland plants, more animals, more cleaning of the water and everything else. We would save all kinds of money for the taxpayers on the paperwork, and everybody agrees that it is much more valuable ecologically to have one large tract of wetland than a bunch of small ones."

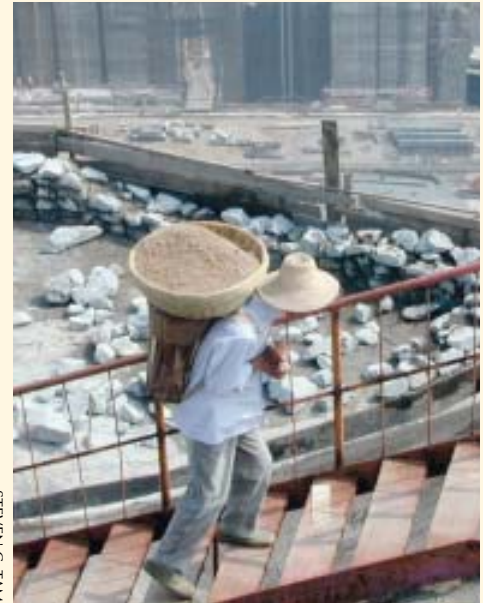
But Bennett's project would be the first privately built and managed wetland bank in the state. And in the words of environmental engineer Rollin Reineck, who consults on the project for Bennett, "The hardest part is not the technical part — the excavation, the hydrology, or the biology. It's dealing with all the bureaucrats."

"I have more than \$100,000 into this thing with legal fees, engineering fees, and all the rest," says Bennett. At one point, regulators fined him when his

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STEVEN C. TAM



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FRANK STEVENSON

Chinese imports of cement for its massive industrial buildup have led to interruptions in U.S. import deliveries this summer. The partially completed locks above are part of China's continuing Three Gorges hydroelectric dam project, which will take 36 million yards of concrete and 354,000 tons of rebar to complete. Above right, a worker carries cement for the project in a wicker pack-basket. At right, the 300-foot cement storage dome at the Providence, R.I., facilities of Glens Falls Lehigh Cement, a U.S. importer jointly owned by the German firms Heidelberg Cement and Dyckerhoff AG, stands ready for a shipment of Turkish cement. Eighty percent of America's domestic cement production and almost all its East Coast cement import facilities are foreign-owned.

## Cement Shortage

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caused shipping rates to double.

Chinese demand is not likely to slacken, say experts. Trends in the past decade have left the country in a strong cash position. And with growth pushing China into greater prominence, any move the country does make is sure to have repercussions.

**Mexicali blues.** As U.S. concrete firms scanned the horizon for inbound cement ships, chief economist John Bloom of Mexican cement manufacturer Cemex sounded off about a possible overland rescue. The world's largest cement supplier, Cemex is also the third-largest U.S. producer of cement, with American plants produc-

ing about 14 million tons annually. (Foreign-owned cement companies account for fully 80% of America's 112-million-ton domestic production.) But since 1990, Cemex has been saddled with anti-dumping penalties imposed by the U.S. Commerce Department. In mid-May, Bloom told the Reuters news service that the firm's U.S. plants were operating at full production, but that its Mexican plants could supply more cement if the import duties were lifted. Bloom was in Washington, D.C., in early June for negotiations with the Commerce Department, but neither side had any public comment.

**What's next?** Bloom and other informed observers don't see any quick end in sight to the concrete shortage.

They say making up the global shortfall in ocean shipping could take two years or more, depending on how fast shipyards can get new boats in the water (and how fast existing older vessels wear out). Domestic producers are running at full capacity, and new plants would take years to build even without the inevitable regulatory and political delays.

But that hasn't stopped politicians from praying for a quick fix. Florida congressman Mark Foley wrote a letter in May to Commerce Secretary Donald Evans, urging him to investigate the South Florida shortages, according to the *Miami Herald*. In an election year, said Foley hopefully, "anything that hurts the economy won't be tolerated for long."

## Horsehair in Old Plaster May be Arsenic-Laden, Investigator Warns

A Delaware engineer investigating old tannery sites is warning remodelers of a possible risk of arsenic exposure from old plaster that contains animal hair.

Tasked with evaluating former tannery sites in Delaware, Kevin Hansen of the environmental firm Tetra Tech looked into the history of tanning in



Horsehair used in old plaster may have been soaked with arsenic, making plaster demolition particularly harmful to remodelers.



the area, which dates back to at least the early 1800s and continued up to the 1950s. Historical documents and interviews with surviving workers revealed that the leather-making industry routinely used arsenic to strip hair off animal hides. On the side, says Hansen, the tanneries sold horsehair to the plaster industry.

“The hides were soaked in a slurry of lime and arsenic,” he explains, “which was enough to soften the hair and cause it to begin to fall out. The workers would scrape the remaining hair off, so they were soaking themselves in the arsenic.” Tannery workers often developed a malady called “blackfoot disease” from the arsenic exposure.

“The waste product was a cake containing horsehair, lime, and arsenic,” says Hansen. “The arsenic amounted to a few percent by weight of the total mass of lime.” Plasterers mixed the whole mess into their product, he says, but the proportions were held as a trade secret.

It’s clear that the tannery’s

lime cakes were toxic, says Hansen: “Their other big customer was the folks selling rat poison.” But he can’t say for sure whether today’s remodelers risk any harmful exposure: He’s not a health expert, and he hasn’t tested any old plaster. “That would be the next step,” he says.

“This is the first indication I’ve seen in the literature that this is a potential risk,” says Hansen. “It obviously raises a whole lot of questions that I can’t answer. I can’t say that the presence of hair means that there is arsenic, because I can’t support that. But one has to wonder, where did the hair come from? And in this case the obvious answer is the tanneries. My hope is that people will be spurred to caution, and that people will investigate.”

Any good industrial lab can measure arsenic levels in plaster for about \$50, says Hansen. And given the known risks of silicates and allergens, he points out, dust protection is common sense anyway for workers doing demolition. “My intention is just to get the word out,” he says. “Ninety percent of the benefit is simply warning people.”

### OFFCUTS

**City officials in Dallas have informed 32 building inspectors that they will be fired for filing false paperwork** to cover up the fact that they weren’t working, the *Dallas Morning News* reported in June. Seventy building department employees in all, about half the total workforce, will be disciplined as a result of a city investigation into sham timesheets. The misbehavior came to light when administrators counted fewer inspection reports on file than the total number of inspections city employees had reported conducting.

**The Portland Cement Association (PCA) has received American National Standards Institute (ANSI) accreditation** as a standard-writing organization, and invites interested parties to help create a new ANSI standard on prescriptive design and construction requirements for concrete walls in residential construction. To conform with ANSI requirements, says PCA, “the standard-development committee will comprise a balance of concrete producers, users, and general interest groups ensuring that no one group dominates the process.”

**Beazer Homes has set aside \$24 million to pay anticipated claims related to mold in hundreds of Indiana homes**, reports the *Atlanta Business Chronicle*. Beazer inherited hundreds of mold problems when it purchased Crossing Communities in 2002. The homes, mostly in the Indianapolis area, were originally built by Trinity, LLC, which Crossman had bought in 2000. State prosecutors have stepped in to investigate many of the Indiana cases, which reportedly relate mostly to moisture in poorly detailed brick-veneer exterior stud walls.

**OFFCUTS**

**The Carmel, Ind., city council has withdrawn a proposed ban on vinyl and aluminum siding after critics labeled the idea “snobbery and exclusion,”** according to the *Indianapolis Star*. Instead, the council recommended the creation of an architectural review board to supply guidelines for the city Plan Commission.

**A state analysis shows that Massachusetts towns typically profit from new home starts,** according to a *Boston Globe* report. The study of 215 communities showed that new tax revenue exceeded new school costs in 170 municipalities, and fell short in 45. On average, towns netted between \$1500 and \$2000 a year from each newly-built home. But less affluent towns with few high-end homes and many multi-family projects are struggling to manage cost increases caused by growing student populations.

**Impact fees to fund school construction in Lee County, Fla., have been declared legal by a state judge,** ending a three-year battle and opening the way for the county to start spending \$40 million on new schools. Florida Circuit Judge James Seals ruled that the methods used by the county to show a reasonable connection between new home construction and the county’s need for new schools, and to set fee levels, were not unreasonable. But in an advisory note, the judge criticized the county administration for not taking enough care in its calculations to clearly justify its policy and deter the costly lawsuit.

**Four to five thousand Dallas construction trade workers may get help becoming homeowners themselves** under a pilot program introduced by former HUD Secretary Henry Cisneros, according to a report in the *Dallas Business Journal*. Cisneros now heads up CityVista Homes, the company he started several years ago as a joint venture with KB Home to build affordable housing in working-class urban areas. Thousands of Dallas workers earn a living building homes but do not own homes themselves, said CityVista vice president Fernando de Leon. Cisneros and de Leon met with Dallas community leaders in May to line up support for the idea.

## California Passes Workers Comp Reform

California Governor Arnold Schwarzenegger succeeded April 16 where previous governors have failed, gaining near-unanimous legislative approval for a sweeping reform of the state’s workers compensation system. Signing the bill on April 19, Schwarzenegger said, “Our message to the rest of the country and the world is that California is open for business.”

The new governor spurred legislators to action with a promise to take his reform proposal to the voters if lawmakers failed to act by a March deadline. Reform backers won the final vote walking away, with a tally in the state House of 77 to 3, and in the Senate of 33 to 3.

California’s workers comp system has long been one of the nation’s most costly, covering more workers for more different conditions than most other states. The reform package aims to cut payouts back sharply by applying strict new conditions to benefits. It sets limits on medical benefits for injured workers, and it ends disability payments after two years instead of the current five. Workers must choose doctors from a pool set up by employers and insurance companies, and only treatments that conform to American Medical Association guidelines will be covered. Diffuse, non-specific ailments such as back pain won’t be covered at all.

**Results uncertain.** The new law took effect immediately, and results were evident by June as the state’s largest comp carrier, State Compensation Insurance Fund, applied for an average 7% rate decrease. But that was still much less than the 20% reduction that California Insurance Commissioner John Garibaldi called for earlier in the year, or the 30% decline Schwarzenegger has predicted as a result of the new law.

An unfazed Schwarzenegger told reporters that he expected further declines as the new system kicks in. But he’s counting on the market to make insurers pass on any cost savings to ratepayers; the reform law did not include any controls on premiums. Observers say that if rates don’t drop quickly, however, political pressure will increase to regulate rates downward.

## New Lightning-Resistant Flexible Gas Line Shines During Demonstration

**O**megaFlex, Inc., the Exton, Pa.-based company that makes TracPipe flexible stainless steel gas piping ([www.omegaflex.com](http://www.omegaflex.com)), has introduced a new product called CounterStrike that is engineered to withstand lightning strikes better than standard flex-pipe products. The company introduced the new piping material at a demonstration in Frisco, Tex., where engineers from Pittsfield, Mass.-based Lightning Technologies ran tests to simulate the effects of a moderately powerful lightning strike.

Gary Woodall, a fire investigator with Donan Engineering (Jasper, Ind.), who has investigated several cases of lightning-related fires involving flex-pipe (*In The News*, 5/04), attended the demonstration by invitation.

"In the test they applied a charge of 13,000 to 15,000 volts," Woodall told *JLC*. "It smoked the inside of the jacket — you could see it — but it didn't blow

a hole in it. It was not a pinpoint discharge." The covering on the new CounterStrike product is relatively low-resistance, Woodall explained: "It actually spreads the discharge out."

OmegaFlex doesn't expect the new material to handle lightning much beyond average intensity. "Lightning comes in many forms and strengths," explains Lightning Technologies executive and engineer Michael Dargi, "and no material is going to hold up to every lightning strike. But this product should reduce the incidence of fires."

"Not every part of the country experiences a high risk of lightning strikes," points out OmegaFlex President Kevin Hoben. OmegaFlex is marketing CounterStrike along with its GasBreaker valve, which is designed to close automatically when the flow of gas suddenly surges above the set point, indicating a line break. The company suggests that installers

use its "good, better, best" graduated response, applying costlier and more elaborate protective systems where they are justified by locally high risk.

Code-compliant protection for a gas pipe installation relies on equipment grounding as a means to ground the gas supply system. In the OmegaFlex "good" case, an electrician would install a bonding jumper between the gas supply piping and the electrical system for the home, giving them a common grounding pathway. The "better" case uses CounterStrike piping for all gas supply lines, and the "best" method runs the main gas line into the house through the earth beneath the foundation slab to a manifold. The GasBreaker safety valve is offered as an option in the basic system (local code may also require it), and as a recommended component of the upgraded alternatives.

### Creating a Wetland Bank

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temporary road went over the edge of its right-of-way. "I told them that we were taking the road out and turning the whole thing into swamp," he said. "They didn't care."

One stumbling block was a clause in Michigan law that would have made the area a regulated wetland before it officially received its bank status and could sell credits. "If something stopped the certification then," says Reineck, "the property could be locked up forever and the investment would be lost. The state guys were saying, 'we wouldn't do that. At some point people have to trust each other.' They couldn't understand why we wouldn't go for that."

Bennett says he asked an official whether a foundation hole would turn

into a regulated wetland if it filled up with water. "He sort of looked at me with a funny expression and said, 'Well, technically, yes, that could fall under our jurisdiction.'"

But with support from Mike Molnar, Bennett's state representative, the wetland bank project has gotten approval and is underway. "We've removed the trees, and we're taking sand out now," says Bennett. The experience has given him an ironic new awareness of his legal environment. "Twenty years ago I filled in some drainage ditches in my back lot, and now I have 20 acres of marshland behind my house," he says. "It's full of herons, ducks, foxes, and marsh flowers. If I filled that in now, the state officials would prosecute me. But when I want to build another one just like it, the same people try to tell me it's impossible." 

