

NOTEBOOK

MAY 2000

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Census Bureau Releases Top 10 List

Recently released housing growth statistics from the U.S. Census Bureau paint a revealing picture of building activity over the past decade. All of the top ten states for building fell into two distinct groups — the first in a band stretching south and eastward from the Pacific Northwest, and the second in a more compact cluster in the Southeast.

The Bureau's numbers on housing units, which covered the period from 1990 to 1998, found that Nevada led overall, with a whopping 48% increase. It was followed by six other western states: Utah, Idaho, Arizona, New Mexico, Washington, and Oregon.

Much of the region's growth is attributed to a steady influx of retirees into the desert states. Nevada also posted the largest percentage increase in households aged 65 and over, with Arizona and Utah registering third and fifth in that category.



Living With Portland's Urban Growth Boundary

In a restrictive housing market, only resourceful builders survive

When Portland, Ore., put limits on urban growth in 1979, the measure enjoyed broad public support. The Urban Service Growth Boundary, or UGB, was designed to preserve farmland and prevent urban sprawl by imposing a strict outer limit on residential development. But this year, as the UGB approaches its 21st birthday, area builders are severely pinched by a shortage of land within the boundary, and many are calling the policy deeply flawed.

At the heart of the controversy is Metro, the regional agency responsible for land-use planning in the area enclosed by the UGB, which encompasses parts of three counties, the city of Portland, and 23 of its suburbs. As

the region's population has grown, Metro has responded to the demand for new housing by mandating smaller lot sizes and promoting row houses and other high-density housing, such as combined residential and office space. That has kept housing available, but at a cost: Portland now ranks as one of the nation's least affordable cities.

Jeff Fish is a Portland contractor who builds 20 to 25 houses per year, mostly as infill. "We bought into the boundary idea because we didn't want to see all the land go for strip development," Fish says. "Now we're all clamoring after the few lots that are left." Today's builders, he says, are paying nearly \$50,000 for building lots that went for \$7,500 just seven or eight years ago. "If a lot goes on the market at eight o'clock and you don't get there until noon, you find that there are already four or five offers on it."

Planning advocates, on the other

hand, contend that the scarcity of land means that the system is working as it was meant to. Conditions within the UGB, they say, are no different from those that confront builders in older, heavily developed metropolitan areas elsewhere in the country.

Large builders, however, who need economies of scale to operate at a profit, have been hurt badly by the growth restrictions. "The average subdivision inside the UGB is around 19 units," says Kelly Ross, of the Home Builders Association of Metropolitan Portland. "In most parts of the country, it's more like a hundred units. Building is becoming a sort of boutique industry."

Many smaller builders are also looking beyond the Portland metropolitan area, where land is easier to come by. "There's a lot of building going on around McMinnville, down in Yamhill County," says Kelly Ross. The state

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Portland's Urban Growth Boundary

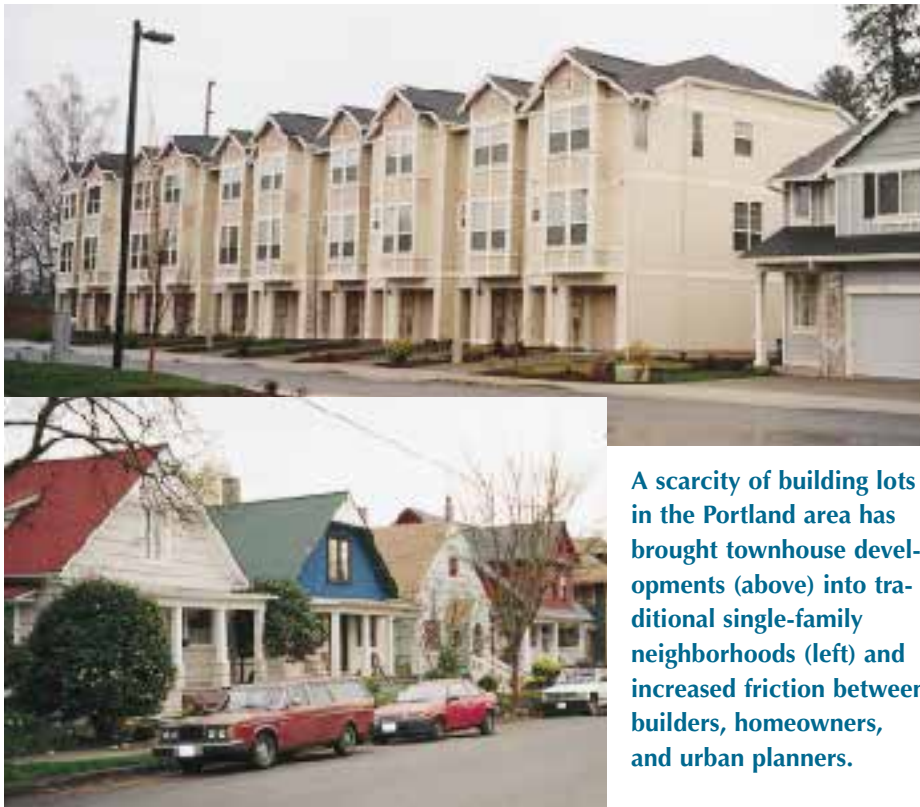
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capital of Salem, 40 miles south of Portland, has also been a focus of building activity. Ironically, commuter traffic between those fast-growing areas and Portland itself has become a major source of traffic congestion — something that the growth boundary was intended to prevent.

Others are going even further afield. Jeff Fish has been selling some property in Portland and buying land in Las Vegas. "I think I'll be building down there a year from now," he says. "A lot of us are really struggling. I know two guys who are building in Phoenix, and four or five of my competitors are already in Vegas. It's not a matter of wanting to go, but of being forced out."

Those home builders who remain are often left grappling with policies that seem designed to frustrate them. The

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A scarcity of building lots in the Portland area has brought townhouse developments (above) into traditional single-family neighborhoods (left) and increased friction between builders, homeowners, and urban planners.

Engineered Lumber, OSB Rise; Solid Lumber, Plywood Decline

According to a recent study commissioned by the Wood Products Council, use of engineered lumber in new home construction has increased sharply in recent years. The study looked at all softwood lumber products used in new homes during 1998, and compared them to similar figures gathered in 1995. The researchers looked at everything from framing lumber to finish moldings, including the wood components of manufactured items, such as wood stiles and rails in steel and fiberglass doors. Although the study's \$600 price tag means that few builders will read the document from cover to cover, the American Plywood Association has released portions of it. Among the highlights:

- In 1998, new home construction in North America accounted for 22.7 billion board feet of softwood lumber, or 38% of the total volume used.
- Use of engineered-wood lumber products per housing unit increased by 78% between 1995 and 1998. Not surprisingly, most of this increase was at the expense of solid-sawn lum-

ber, although the increased size of new homes meant that sales of solid-sawn lumber also increased by 5%.

- Structural wood-panel use per unit was up overall. Plywood lost market share, while use of OSB increased.
- Use of structural wood-panels for wall sheathing remained more or less constant during the study period. Among competing wall sheathing products, only foam sheathing posted an increase in market share.
- Wood I-joists' share of the residential raised-wood floor market rose to more than 30%, while both open-web trusses and solid-sawn joists declined.
- The 1998 figures found that interior steel studs made up a relatively small portion of the market, at 4.8%. In 1995, however, steel's market share stood at just 2.4 % — indicating that use doubled in just three years.



Swinging shingles. According to the *New York Times*, Home Depot stores have gained a reputation as a good place for singles to meet, replacing laundromats and bookstores as the hot new place to cruise. Many women feel that they meet a higher caliber of man at Home Depot than they would at a bar. "There are always cute guys around — *helpful* cute guys," one single woman gushed. Similarly, some men feel that women shopping at Home Depot tend to be interesting. "It says a lot about her personality if she's fixing something up or renovating," said one single man.

SIP production doubles. *Building Material Dealer* reports that members of the Structural Insulated Panel Manufacturer's Association have more than doubled their manufacturing capacity in the past four years. At present, the association's members devote nearly 1.2 million square feet of manufacturing space to panel production.

New home sales reached a new high in 1999, according to the U.S. Department of Commerce. The overall sales figure of 904,000 represented a 2% increase over the 886,000 sales reported in 1998.

Goodbye to ornamental railings? The National Ornamental & Miscellaneous Metals Association (NOMMA) is expressing its concern over a provision in the new International Residential Code, which could effectively outlaw many types of ornamental guardrails. The relevant passage states that "required guards shall not be constructed with horizontal rails or other ornamental patterns that result in a ladder effect." The determination of what constitutes a "ladder effect" would apparently be left to the judgment of each individual building inspector.

Construction fatalities are up 25% since 1993, according to OSHA. In 1998, 1,171 workers died on construction sites, including 383 people who fell from ladders, roofs, and staging.

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city's emphasis on townhouse developments can spell disaster for a builder who misjudges the market — because, builders say, it's impossible to force customers to buy products they don't want. "You can sell \$120,000 townhouses in the suburbs," says builder Ron Nardoza, "but nobody wants an expensive townhouse unless it's right in town. I can show you some very nice \$225,000 townhouses that are just sitting empty." Bob McNamara, a land-use planner with the National Association of Home Builders, agrees. "No one really wants to live at eight units per acre. It's something people put up with when they have no choice."

Under state law, Metro is required to adjust the UGB as required to maintain a 20-year supply of building land. In 1998, Metro sought to push the original line out to encompass an additional 3,500 acres. But in the pressure-cooker atmosphere of Oregon land-use planning, it soon became clear that altering the boundary would be much more complicated than simply changing a line on a map.

Conservationists and farm groups oppose the boundary expansion, as do the wealthy residents of rural "hobby farms" outside the existing line. A coalition of expansion opponents has gone to court in an attempt to block it. That case may take several years to resolve, and has prompted the Home Builders

Association of Metropolitan Portland to launch its own legal challenge, aimed at forcing the state to live up to its obligation to make the land available. Meanwhile, disgruntled citizens — angry at Metro for imposing row houses on what were traditionally single-family neighborhoods — are threatening a ballot initiative to strip the agency of its power to establish minimum densities.

But while the growth boundary has been a major headache for builders of new homes, it has actually improved business for remodelers, at least in the short term. "Business has been good lately," says Tom Kelley, of the Neil Kelley Co., a family-owned design-build/remodeling business. Because the UGB tends to drive up property values and restricts new houses to small lots, he explains, many homeowners would rather invest in a major remodeling project than move into a new home. "You have people paying \$200,000 for a house, then spending another half-million to remodel it," Kelley says. "Whole-house remodeling probably makes up 15 to 20 percent of our business today. Ten years ago, it was more like 5 percent."

Still, he cautions, even those who benefit from the current situation aren't necessarily happy with it. "We're all in this together," he says. "A lot of remodelers build a new house now and then, and most builders do some remodeling. Without a viable homebuilding industry, remodeling has no future." 

Bone-Shaped Wires Yield Stronger Concrete

Researchers at the Los Alamos National Laboratory have developed an innovative approach to reinforcing concrete, which may someday allow builders to pour strong, crack-resistant slabs, walks, and driveways without rebar or reinforcing mesh.

The new method depends on fortifying the aggregate with what the lab calls “bone-shaped fibers” — soft steel wires, slightly larger



than an ordinary straight pin, with rounded heads at each end. Tests show that concrete that contains one percent reinforcing wires is 90 percent tougher than conventional glass-fiber reinforced concrete. The increased toughness means that instead of breaking suddenly when overloaded, the wire-reinforced concrete fails more gradually, fracturing over a relatively wide area before a final break occurs.

According to Los Alamos spokesman Joe Gutierrez, modified versions of the bone-shaped fibers may lead to improvements in plaster, stucco, and other building materials. “We’ve talked to manufacturers of concrete roof tiles about using the fibers to make tiles that are stronger and lighter,” Gutierrez says. Adding plastic fibers to drywall, he notes, could result in lightweight wall panels with the ability to resist the wind-driven missiles hurled by hurricane-force winds.

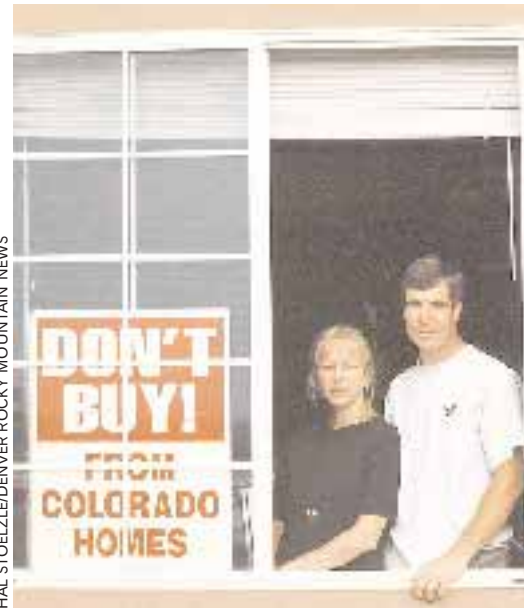
Disgruntled Homeowner Slapped with Bill for \$892,000

Most veteran builders have a client-from-hell story, but former Colorado builders Barry and Debra Rein have one that’s hard to beat. Charles Wilson and his wife, Luan Loerch-Wilson, bought a new \$192,000 home in the town of Aurora from the Reins’ company, Colorado Homes Ltd. Charles Wilson soon complained of plumbing defects and settling of the front porch and patio. When the problems weren’t resolved to his satisfaction, Wilson launched an all-out offensive against the builder.

Beginning in 1996, he posted a sign in his garage window that read “Don’t Buy! From Colorado Homes,” and lettered his minivan with the words “Don’t Buy From Colorado Homes. They Don’t Do Warranty Work.” Not content with putting his complaints in writing, Wilson also picketed the Colorado Homes construction trailer, where he actively turned away potential customers. “Real estate agents just never wanted to drive people into the neighborhood,” said Rein’s attorney.

The homeowner’s scorched-earth campaign was devastatingly effective. After 15 months of effort by Wilson, Colorado Homes had lost so much business that Barry and Debra Reins closed the company and moved out of the state. Not surprisingly, there was some personal unpleasantness along the way: Rein accused Wilson of assaulting him, while Wilson claimed that he had been threatened by Rein. Each man sought a restraining order against the other.

But while Wilson won the initial battle, Colorado Homes ultimately won the war. In February of this year, the Arapahoe County District Court ruled that Wilson had slandered and libeled Reins and his wife, and ordered the homeowner to pay them a total of \$892,00 in damages and interest. It’s unclear how much of that sum the Reins will actually collect. “I’ve been vindicated by being right,” Barry Rein said, “but it’s cost me \$100,000 in legal fees and lost business.”



HAL STOELZLE/DENVER ROCKY MOUNTAIN NEWS

Minnesota Energy Code Takes on Backdrafting

Once again, Minnesota's residential energy code is blazing new territory. The latest version of the code, which took effect on April 15, 2000, includes new requirements intended to prevent the spillage of combustion by-products from atmospherically-vented appliances. The depressurization standard is intended to account for exhaust fans and clothes dryers when calculating the amount of outdoor air required for ventilation and makeup.

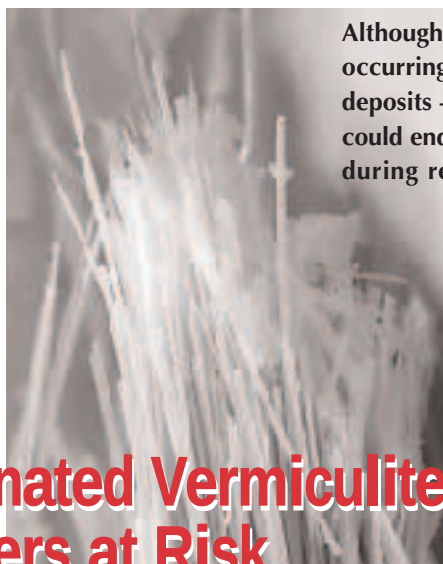
This requirement is the latest addition to Minnesota's strict energy code, which requires mechanical ventilation in all new homes (see *Notebook*, 12/98). Minnesota's

first-in-the-nation depressurization standard is not simple. "We didn't do builders a favor by writing the code as complicated as we did," admits Bruce Nelson, a senior engineer at the Minnesota Department of Commerce.

Builders have six options for compliance, including four prescriptive options, one "aggregate" option, and one performance option. Factors affecting whether or not powered makeup air is required include how many exhaust appliances a house has, and whether the house has depressurization-tolerant, sealed-combustion appliances, or depressurization-intolerant, atmospherically vented appliances.

"Why haven't mechanical codes been addressing depressurization?" asks Nelson. "It is amazing that this depressurization problem has gone on this long. We felt that houses shouldn't be made any tighter until ventilation and depressurization are addressed."

Late last year, the Seattle *Post-Intelligencer* ran a series of investigative reports on a serious health hazard associated with vermiculite, a granular mineral that was once a popular loose-fill insulating material. Vermiculite from a mine in Libby, Mont., owned by the W.R. Grace Co., was found to be contaminated with a particularly toxic form of asbestos. (Vermiculite from other sources — including another Grace-owned mine in South Carolina — is thought to contain little or no asbestos.) Nearly 200 mine workers and



Although vermiculite itself is non-toxic, naturally-occurring asbestos fibers present in some vermiculite deposits — as in this electron microscope image — could endanger builders exposed to the material during remodeling work.

Asbestos-Contaminated Vermiculite May Put Remodelers at Risk

Libby residents have died from asbestosis, while hundreds of other cases have been diagnosed. Railroad workers who handled ore-filled boxcars have also been affected, as have workers at a lawn-care products company who were exposed to vermiculite used in potting soil.

So far, there are no reports of similar illnesses among builders. But because hundreds of thousands of homes nationwide are thought to contain vermiculite insulation from the Libby mine (which was sold under the trade name Zonolite, until the company stopped producing it

in the early 1980's), the material is a potential threat to both homeowners and remodelers.

How serious is that threat? So far, at least, that seems to depend on which government agency you ask. "Vermiculite is not asbestos," says Tom Marples, of OSHA's Office of Construction Services. "Under the OSHA regulations, it's considered a nuisance dust."

The EPA, on the other hand — which has taken the lead in investigating the situation in Libby — suggests that vermiculite should be approached with caution. "Our

advice is that vermiculite should be treated like any suspected asbestos-containing material," says EPA spokesperson Lauren Mical. "It should be tested by a qualified lab, and if it's found to contain more than one percent asbestos, no one but an asbestos abatement contractor should handle it."

Much of the vermiculite from the Libby mine appears to contain from one percent to five percent asbestos by weight. But according to EPA technical expert Sam Vance, testing for asbestos has some built-in uncertainties. Because the asbestos tends to occur as compact bundles, he explains, one particle of vermiculite might be laden with fibers while another nearby might contain none.

Vance believes that anyone venturing into the presence of vermiculite even briefly should wear disposable hooded coveralls and a respirator with a HEPA cartridge. "You don't want to stir this stuff up," he says "The particles are so light they can remain airborne for years, and it doesn't take many of them to kill you."