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With energy costs rising, homeowners love the efficiency of their special dwellings

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Paul Coonan was fed up the second time his basement flooded. So fed up that he began house hunting. "I went looking for houses," the Auburn resident said. "I saw this house. It didn't have a basement and my wife loved it."

What the couple fell in love with was an earth berm home, a house style in which soil is mounded against exterior walls. "When it rains now, I don't care," Coonan said. "At the other house I was up three or four times during the night making sure there were no leaks." The couple discovered their new home also is energy-efficient, quiet and cozy.

It's the home style's efficiency that made them a popular choice with energy-conscious homeowners during the fuel crisis of the 1980s, when most of the berm homes in the area were built, said Candace J. Bonnell Paige, associate broker at Harris/Bush Realty in Bay City. Once the energy crisis subsided, people looking to build new homes began to drift away from the unusual style.

But with home heating and cooling costs pinching pocketbooks once again, the time might be ripe to give berm homes another look, says Neil A. DeShano of County Wide Builders in Auburn, whose brother, Gary DeShano, worked closely on the berm design back in the '80s. "It's a good idea," DeShano said. "I'm hoping people will think of them again because of energy costs."

Cliff and Lucille Lemuel of Auburn say the heating, cooling and electrical bill for their 1,535-square-foot berm home runs around \$785 per year.

Berm homes are energy-efficient because they typically use more insulation than is required by code and take advantage of the earth's warmth. Earth below the frost line is 55 degrees F year round. But there is more to it than that. Earth berm homes have a foundation of special wood used for foundations only. Since the foundation is also the exterior of the home, the homes are more cost-effective to construct, said DeShano, who built and lived in the Lemuel home at one time.

"It looks like treated deck wood," he said. "But it has endless life. It's treated for insects, deterioration and moisture."

By using the wood foundation, extra insulation can be added. The homes are built with an 18-inch crawlspace. A force-air furnace pumps heat into the crawlspace. Floor registers allow the heat to rise into other parts of the home. In the summer, the homes stay as cool as basements in conventional homes. "In the summer the air conditioner hardly ever runs, no matter how hot it is," Coonan said.

While earth berm homes are partially underground, they do not have a basement feel. Windows are just like those found in any other home, and let in lots of light, giving the homes a bright, airy feel. In fact, on the inside, earth berm homes look pretty much like any other home and can be as big or small as the owner chooses.

Flooding is not a worry since the home is surrounded by pea gravel under the earth. The gravel acts as a drain for water.

One disadvantage: Since there are no basements, berm homeowners must carve out storage space in other areas. But, Cliff Lemuel said, there are no stairs to climb. And, he points out, there's no need to get out a ladder to clean gutters or put up Christmas lights. "It's easy to clean the windows," he adds.

And outdoor noise is rarely a problem. "It's so quiet, if a neighbor is outside, I don't hear it," Lemuel said.

As for the cost, that depends on what a home-owner is looking to build. Pretty much any design can be made into a berm home. "You can have anything you want except a basement," DeShano said.