IRONSTRAW GROUP

"Homes Cows Would Love to Eat" was the title of *The New York Times* article that changed the lives of Michael and Spring Thomas.

Michael remembers, "It was a hot, sultry December afternoon in San Juan, Costa Rica. Our flight was more than an hour late and our bodies were stuck to the molded plastic airport seats. The fellow sitting next to us offered us his paper when he got up to take a walk." The article was about the revival in New Mexico of the age-old practice of strawbale construction. Michael and Spring were transfixed and returned to their home in Seattle, Washington determined to build a strawbale house of their own.

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Five months of consistently hearing, "No, you can't build a strawbale house," from local planning and building officials made them even more resolved. With research, they learned about the economic and environmental advantages of strawbale construction, and decided they needed to share this knowledge with others. In 1994 they founded IronStraw Group, now a 501(c)(3) non-profit, in an effort to make strawbale building a credible, and more widely used method of construction. In October of the same year, more than 60 people came together to raise the walls of the first fully permitted and approved, load bearing, strawbale house in Washington State.

IronStraw Group
Stronger Communities through Strawbale Building

Describing how they got from a flat out "no" to full permitting, Spring explains, "We educated key people, collected all the data, brought doughnuts to meetings, and never gave up."

Spring and Michael have gone well beyond building their own strawbale home, though. IronStraw Group supports its mission of "Stronger Communities Through Strawbale Building" by: hosting public forums; presenting at conferences and seminars; conducting and supporting research and testing of sustainable technologies, systems, and resource-efficient designs; working to develop demonstration projects and prototypes; publishing educational and informational materials; and working with communities, neighborhoods,

individuals, other organizations, schools, governmental agencies, and businesses to promote sustainable development through strawbale construction.

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After involvement in the construction of more than 25 strawbale homes and a 5,000 square foot school in western Washington, IronStraw Group moved to eastern Washington in 1998 – closer to the sources of straw, and to an area experiencing a dramatic housing shortage.

Within a relatively short period, IronStraw forged partnerships with over 50 community organizations and corporations and laid plans for a second demonstration strawbale house. This time, however, they incorporated another important goal in the project – teaching building skills to at-risk, disadvantaged, and rural youth. Five at-risk youth – kids who had dropped out of high school, gotten involved with drugs, and in some cases even spent time in jail – became an integral part of the building crew.

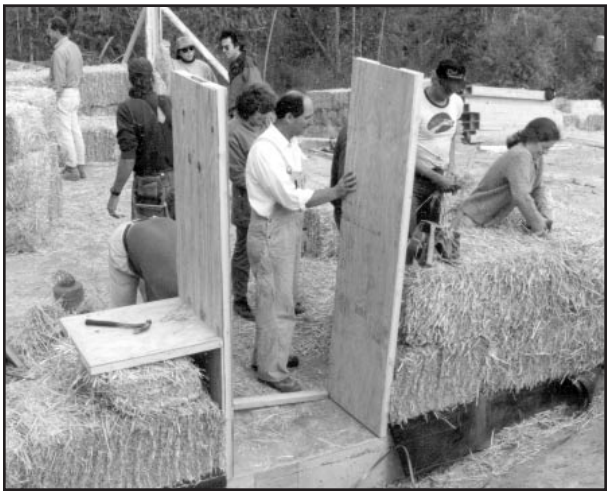
"These kids were a large part of the joy and trials of working on this project. But to hear an 18-year-old, who initially wouldn't answer a direct question, burst out in song as he's pounding with a hammer makes all the frustration melt away," explains Spring. "Natural leaders stepped forward. Our 'Mr. Inventor' always had an idea, a new way to do something. None of them felt they were misfits, and none of them put another down. They joked, rapped, and were there for one another and for us. We were part of profound conversations ranging from why prison is no place to be, to breaking the cycle of teenage pregnancy."

Michael and Spring Thomas

In June of 2000, IronStraw began a second youth partnership program with the Yakama Nation, which was looking for opportunities to build affordable housing as well as to "pull up our youth," according to Victor Gardee, Director of Housing Development.

More recently, IronStraw formed a partnership with the Washington Association of Wheat Growers and the Washington State Office of Community Development to build housing for migrant farm laborers. Farm worker housing is a critical issue in Washington. A 1999 report from the Governor's office found that, "The work of growing, harvesting and shipping food to market ranks as the state's third-largest industry. Seasonal farm workers are a workforce critical to the success of agriculture in Washington, but we fall short in providing

adequate housing for thousands of farm workers and their families. About 60% of the migrant workforce lack housing during the growing season."



Wall raising weekend

The Wheat Growers are not only interested in working with IronStraw to develop farm worker housing, they also see a perfect opportunity to remedy one of their most intractable environmental problems. After they harvest their grains, the farmers in Washington State are left with an estimated 7.5 million tons of straw in their fields. Farmers were fined tens of thousands of dollars by the state for illegally burning this straw in the summer of 1999. After 30 members of the Association of Wheat Growers toured IronStraw's demonstration strawbale home in Cashmere, they were excited to discover the prospect of selling building quality bales of straw at $2 per bale.

Not only is straw a plentiful and renewable resource, it also makes an excellent building material. Strawbale structures are rugged, with walls that can withstand lateral load tests simulating winds of 100 miles per hour. "You realize how stable it is when you see people walking on top of the walls, made of two-foot-wide, 80-pound bales," explains Michael. Strawbale is actually more fire-resistant than ordinary wood-framed walls. Strawbale construction is also typically less expensive than conventional construction – with costs for owners/builders as low as $20 per square foot, compared to $60 per square foot or more for standard timber frame construction.

"As for insulation value, there is no comparison," Michael adds. The densely packed straw, with trapped air space, transfers heat slowly. So in the winter the house stays warm and in the summer it stays cool, allowing for energy savings. The first strawbale houses were built in Nebraska in the late 1800s, where trees were scarce and the soils ill-suited for sod homes. Families are still living and working in these durable and comfortable homes.

To top it all off, strawbale construction is a very simple technique to learn, according to Spring and Michael, who have conducted numerous workshops teaching people how to erect a strawbale house. "During our community-based building workshops, 25 or 30 people – unskilled, who don't know anything about strawbale building –

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can put up a 1,000 to 1,200 square foot home in a weekend. It's a fun time. When people see how it's done, how easy it is, they say, 'I can do this, I can build my own house.'"

People from all over the world have attended IronStraw's house-raising workshops and taken the technology back to places as far away as Ireland, Japan, and Australia. Habitat for Humanity has also taken advantage of IronStraw's educational programs. By 1999, seven Habitat for Humanity chapters in the U.S. were providing affordable housing through strawbale construction thanks to IronStraw.

A straw bale house taking shape

The IronStraw Group has come a long way since building its first strawbale home in 1994. "We simply wanted to build a strawbale home, be closer to nature and to community, and to be involved," says Spring. "All the publicity and hoopla amazed us. Suffice it to say, we rarely hear Three Little Pigs jokes anymore. Now it's, 'Oh, I heard you on NPR.'"