

Geocell Demonstrates Rapid Deployment Flood Wall for Nashville District Corps of Engineers



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Plastic Floodwall Technology Demonstrated at Barkley

by Dave Treadway

Interlocking plastic grids filled with sand may replace sandbags in future fights with rising floodwaters.

On Friday, Oct. 25, workers from Lake Barkley Resource Office and Readiness personnel from Nashville watched a demonstration of the new technology and the speed with which it can be deployed. And speed of deployment was the primary selling point for developer Geocell Systems of San Francisco, Calif.

Geocell's Al Arellanes said the grids focus on the "time it takes to act in an emergency situation." The company claims the plastic grids, known as Rapid Deployment Flood Wall (RDFW), can greatly reduce the amount of time required to build a barrier against rising waters and protect lives and property for a lower cost.

The Corps of Engineers purchased the geocells, according to Natural Disaster Manager, Jared Gartman, and Nashville was simply observing the test.

Process

Three Geocell employees deployed the cells, which each measure 4 feet wide and 8 inches tall and are the equivalent of 34 sand bags, then demonstrated their versatility by walking on them after they were stacked and filled with sand. They then built a wall equivalent to 2,000 sandbags and filled it in about 30 minutes. The California Department of Water Resources State Flood Center estimates the same wall constructed with sandbags would require 35 people and 19 hours of labor. Company employees then emptied the cells and stored them, demonstrating another selling point. They claim reuse up to six times is possible, depending upon exposure. Current sandbag technology is not reusable and must be disposed of in a landfill.

Tests conducted by the Corps in Vicksburg, Miss., two years ago showed that such a wall can withstand up to 40 inches of static water, and wave action equal to that produced during severe flooding.

"This is another tool for us," said Operations Manager Wayne Lanier.



Photo by Jerry Brdznican

An end loader places sand into a new plastic Rapid Deployment Flood Wall during a demonstration of the new technology Oct. 25 at Lake Barkley. The plastic product is reusable and much quicker to construct than a sandbag structure.

Geocell literature touts the innovative floodwall technology as one-half the cost of sandbag walls when employing contract labor and one-sixth the cost when reused. If volunteer labor is used, the floodwalls are rated at 90 percent of

the cost of sandbags and about one-third of the cost when reused.

Nashville District last used sandbags to protect Smithland during a 1996 flood. Lanier estimated that more than 120,000 sandbags were used.

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