

# DEFENCELL® ENVIRONMENTAL BARRIERS FOR FLOOD CONTROL

## BATTLING THE FLOOD IN SMITHLAND KY WITH DEFENCELL®

April 2011

Situated at the confluence of the Ohio and Cumberland Rivers, Smithland, Kentucky, a historic town and county seat of Livingston County, is no stranger to fighting floods. While rising spring waters have at times threatened the community, Smithland has never had to deal with floods as dire as what late April and early May 2011 has delivered. With little notice, the community of just over 400 people had to prepare for a record surge in river levels. The Louisville office of the U.S. Army Corp of Engineers (USACE) contacted Fiberweb® to request the emergency installation of a Defencell® Flood Wall system.

This project represents the largest ever emergency installation of a Defencell Flood Wall system in the United States. The Defencell Flood Wall is a geotextile-based system, originally developed for ballistic defenses in military operations, and can be quickly constructed utilizing local fill, sand, or other common aggregates.

Within 24 hours of receiving a call from the USACE, Fiberweb delivered three miles worth of Defencell Flood Wall units that, once installed, would provide almost four feet of additional flood protection height to a key stretch of the levee in Smithland.

As a testament to Defencell's ease of use, within an hour of delivery to Smithland small teams were able to start placing, connecting and filling, the Defencell Flood Wall systems using primarily skid steers. And within the first three hours, they achieved an installation rate of 20+ units per hour. At that rate, the teams installed the equivalent protection of approximately 22,196 sandbags in only the initial three hours after delivery of the Defencell Flood Wall system.



Aerial photo supplied by USACE.

## PRIMARY USAGE IN SMITHLAND

Over the next 34 workable hours and under the guidance of USACE, the installation teams were formed from volunteers including local citizens, city employees, National Guard support, and even inmates from nearby correctional facilities. The end result being more than 10,500 linear feet of Defencell Flood Walls had been installed, 700+ units were filled, stretching over one mile in length—stacked two units high—to help raise the town levee to meet the pending flood projections.

The speed of this installation is in stark contrast to traditional sandbagging operations. In such a short window of time, more than 4,700 tons of sand has been contained in the Defencell Flood Wall system. All this can be accomplished with the help of a Defencell Flood Wall system and its flexibility, ability to contour to uneven ground surfaces with minimal prep work, makes angles and curves, while being light weight and man portable for ease of placement.

The leadership of the USACE, the outstanding efforts of the community and volunteers, and cooperative efforts between Fiberweb, Inc. and EMAC, LLC all helped make this work possible.

For further information, please visit  
[www.DefencellUSA.com](http://www.DefencellUSA.com).



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