



## Case Study



GEO-Products, Inc.

# Ocean Springs Beachfront Beach Erosion Control Gulf Coast, Mississippi, U.S.A.

### Background:

The City of Ocean Springs is located on the Gulf Coast of Mississippi and a recently constructed beach-side sidewalk is a popular place for residents to walk. During rainstorms throughout the year and high tides, the water would wash away the sand next to the sidewalk, leaving a large drop-off to the beach.



Ocean Springs Beach Sidewalk  
(Pre-Envirogrid Cellular Confinement System)

### Technical Information:

Materials Used: EnviroGrid 8" EGA20 7,500 SF

Application: Beach Erosion Control

Project Length: May-June 2009 (3 days)



Finished Project

### Problem and Objective:

The Erosion from rain and tides created a 12 to 18 inch drop-off from the sidewalk to the beach. This was determined to be hazardous to residents walking, riding bicycles, or driving off road vehicles onto the beach from the sidewalk and a solution had to be designed.

## Design Solutions:

Engineers decided that a drainage layer, consisting of 8" deep Envirogrid cellular confinement would be the best solution to confine the sand and keep it from washing out during rain and tides.



## Construction Overview:

The installation began with the excavation of a large drainage ditch, adjacent to the concrete sidewalk. A nonwoven geotextile fabric was placed in the bottom of the ditch, connected to the sidewalk, and a drain pipe installed on top of the fabric. The ditch was then filled with angular rock. The Envirogrid cellular confinement system was installed on top of the ditch. This extended out onto the beach and was infilled with a combination of angular rock (over the drainage area), and sand (over the beach).



## Results:

Two days after construction, The Ocean Springs beachfront experienced a torrential rain. In a span of 7 hours the storm dropped 4 inches and the beachfront was like a river. The cellular confinement system held the sand in place and greatly improved drainage at the edge of the sidewalk, accomplishing the objective and solving the erosion problem.



**YOUR EROSION CONTROL SOLUTION.**

**GEO PRODUCTS, L.L.C.**

8615 Golden Spike Lane  
Houston, TX 77086 U.S.A.

Tel (281) 820-5493 / Fax (281) 820-5499  
[www.geoproducts.org](http://www.geoproducts.org)

**Geo-Products, Inc.**

Terry Jones

Tel (507)393-0645 / Fax (507) 261-5420

Email: [rtjones1959@yahoo.com](mailto:rtjones1959@yahoo.com)

[www.geo-productsinc.com](http://www.geo-productsinc.com)