Synteen High-Strength Geotextiles

Lake Pontchartrain Reach 2B Levee Goodhope to Cross Bayou –Phase 2 New Orleans, Louisiana

Reinforced Levee Embankment

A Case Study

Project
Lake Pontchartrain Reach 2B Levee Phase 2 Reconstruction

Location
New Orleans, Louisiana

Owner
United States Army Corps of Engineers

Contractor
Phylway Construction
Thibodaux, Louisiana

Installer
Phylway Construction

Distributor
Contractors Source, Inc.
Houston, Texas

Problem
Reconstruction of levee damaged during 2005 Hurricane Katrina

Solution
Construct reinforced compacted levee embankment comprised of Synteen SC 46K high-strength geotextile

Synteen

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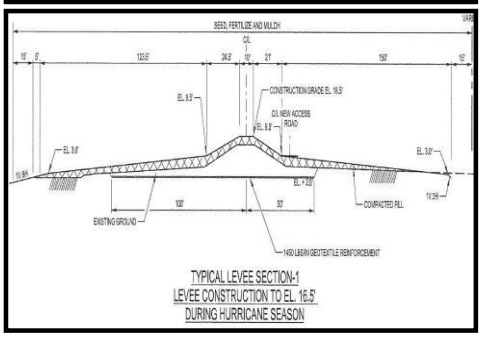
On August 29, 2005, Hurricane Katrina made landfall east of New Orleans, Louisiana. The Category 5 hurricane caused damage in excess of $100 billion dollars. In the City of New Orleans, the storm surge caused more than 50 breaches in drainage canal levees and navigational canal levees, precipitating the worst engineering disaster in the history of the United States.

In evaluating post-Katrina levee performance, the US Army Corps of Engineers found that the several geotextile reinforced levees loaded (filled by the storm) during Katrina performed exceptionally well. The Army Corps attributed the inherent strength and stability of the levee to the inclusion of the geotextile reinforcement.

Geotextiles minimizing toe erosion on the back side of the levee and provide greater global stability benefits of saturated levee fills during flood events.

Synteen's high-strength SC46K geotextile, with an ultimate tensile strength of over 46,000 pounds per foot, provided an affordable, long-term solution to the US Army Corps of Engineers on the Lake Pontchartrain Reach 2B Levee project. Wide roll widths and ease of deployment, produced an efficient installation for Phylway Construction.



TYPICAL LEVEE SECTION-1
LEVEE CONSTRUCTION TO EL. 16.5'
DURING HURRICANE SEASON