

NEW ORLEANS LEVEE SYSTEM, LOUISIANA

Providing levee resilience and durability



Industry: Water
Application: Levees
Location: New Orleans, Louisiana
Product: **PROPEX® Armormax®**

Overview

The U.S. Army Corps of Engineers (USACE), embarked on one of the largest and most comprehensive public works projects in American history following the catastrophic damage caused by Hurricane Katrina in 2005. The Hurricane and Storm Damage Risk Reduction System (HSDRRS) program was established to provide the greater New Orleans Area with a 100-year level



During Hurricane Katrina, most levee failure was due to water overtopping.

of risk reduction. One of the most critical measures of the HSDRRS was the protection of refurbished earthen levees against the erosion-causing hydraulic forces of storm surge overtopping. Without protection, overtopping can lead to significant landside erosion and potentially a breach of the levee. During Hurricane Katrina, most levee failure was due to water overtopping.

CASE STUDY

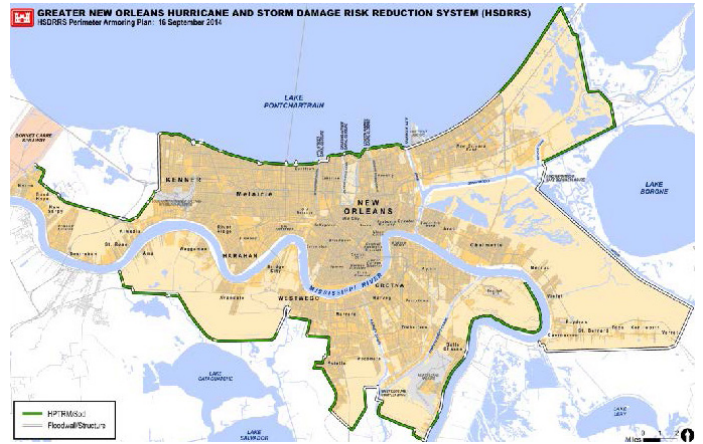
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Challenge

The USACE needed a proven solution, so they partnered with Colorado State University (CSU) to build a full scale wave overtopping simulator. The simulator tested erosion resistance of the **PROPEX Armormax** system for 500-year resiliency HSDRRS overtopping conditions. Testing showed that **PROPEX Armormax**, consisting of High Performance Turf Reinforcement Mat (HPTRM) and Engineered Earth Anchors (EEA), provided increased levee resilience and durability. Additionally, testing showed that **PROPEX Armormax** reinforced vegetation on the earthen levees, which reduces the risk of breaching caused by overtopping waves.

Solution

Full scale installation of the EEAS began in 2015 and has since been installed on over 100 miles of earthen levees in the New Orleans area. Since installation, multiple levees have experienced overtopping from major hurricanes, but have not breached.



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