

SANTA ROSA, FLORIDA

Oyster Lake outfall improvement



Industry: Water
Sub-industry: Flood mitigation, Coastal protection and reclamation
Location: Santa Rosa, Florida
Product: PROPEX® Armormax®

outfall had become severely degraded and the overall health was strained due to major storms and urban growth.

Walton County and other state agencies wanted to reinforce the outfall while preserving the natural vegetation.

Overview

Oyster Lake is a coastal dune lake that creates a unique interchange between a natural stormwater lake and the Gulf of Mexico. When a coastal dune lake reaches a high water level, flow breaks through the dune system forming a channel between the lake and the Gulf. The outfall is critical for regulating water levels and mitigating flooding. Oyster Lake's

FEMA included this project in its Mitigation Action Portfolio (MAP) as a successful nature-based solutions for flood mitigation.

CASE STUDY

Oyster Lake outfall improvement

Solution

More than 2,000 square yards of **PROPEX Armormax**, consisting of High Performance Turf Reinforcement Mat (HPTRM) and Engineered Earth Anchors (EEA), were installed along the channel. This system was selected because it provides slope stabilization and erosion control while promoting vegetation. During installation, 2,000 sea oats were planted within the HPTRM, which is designed to promote vegetation.

After installation, Hurricane Michael (category 4) made landfall 60 miles east of Oyster Lake causing winds up to 80 mph, storm surge, and significant rainfall and flooding at the project location. The vegetated slopes of the outfall withstood the extreme conditions, protecting beachfront homes, nearby businesses, underground utilities, a section of Highway 30A, and a bridge that crosses the channel.



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