



Wetlands Erosion

Dry Swamp Creek • Laurel, Mississippi

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Synergy With Nature™

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Application: Pipeline Exposure within a Wetlands Area

Owner: El Paso Pipeline Company

General Contractor: Submar, Inc.

Location: Laurel, Mississippi

Square Feet: 8,100 Square Feet

Due to bed degradation and lateral bank migration three pipelines had become exposed in the bed of Dry Swamp Creek located east of Laurel, MS. The extent of erosion damage became a danger to the integrity of the pipelines and the flowing water continuously removed the soil, increasing the exposure of the pipelines. This project was more of an emergency situation in that the project was located in a federally regulated wetland area, very sensitive to wildlife habitat. Submar developed a solution to remediate the exposures using articulating concrete matting to protect the pipeline and the environment.

Submar was contracted to cover the pipeline and protect the wetland area. The access into the site was difficult due to standing water in the Pipeline right-of-way (ROW). A timber road was installed to bring in heavy equipment and material into the project site. The timber road also helped to protect the fragile root systems of indigenous plants.

Submar's design entailed grading the creek, lining it with geotextile fabric to safeguard the manufactured grade and installing 60 concrete revetment mattresses. The Submar mattresses are 4.5" thick and with this low profile, generate a smaller impact on the changing of the creekbed elevation when compared to riprap. The mattresses are comprised of concrete elements with vertices between them allowing native wetland grasses to develop a secure root system growing through the concrete structure. Some wildlife utilizes these vertices as a shelter from predators.

Within months native vegetation began to flourish throughout the entire area and wildlife accepted the pipeline protection system. An inspection after two years revealed the stream had returned to its natural state and mattresses were hardly noticeable in the flowing stream.



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