

Southern LNG Shoreline Stabilization of Mitigation Marsh

Southern Liquid Natural Gas Savannah, Georgia

Services Rendered

- Wave Gauge Deployment
- Observation of Ship Trips, Wake Propagation, Vessel Speed, Vessel Drafts, etc.
- Acoustic Doppler Current Profiler (ADCP)
Current and Flow Data Collection
- Wind/Wave Analysis

Project Summary

ATM has worked with Southern Liquid Natural Gas (SLNG) on numerous expansion and permitting projects. This particular bank stabilization was to protect a restored marsh that ATM created for SLNG.

SLNG received mitigation credits by restoring 6.2 acres of marsh at the Elba Island site and enhancing 5.1 acres of upland buffer at an old dredged material disposal site. The restored marsh is evolving as expected into a viable high-marsh system; however, erosion was threatening the mitigation site.

As a result, shoreline erosion analysis and stabilization assessment was necessary. This is a dynamic region of the Savannah River that experiences swift currents, wind-generated waves, and significant ship wake. The ATM shoreline stabilization study evaluated several armoring alternatives.

Based on the analysis of all available data, articulated block and granite rip-rap revetment were the two most favorable alternatives. In the end, articulated concrete block revetment was chosen because it allows for a rapid and durable installation and is cost-effective.

