Tensar Marine Mattresses Provide 15 Years of Robust Scour Protection at Androscoggin River

CLIENT CHALLENGE

The contaminated Lewiston Riverbank was undergoing remediation and the finished bank needed stabilization and scour protection. Since the Androscoggin River is a floodway, the scour protection required a compensatory cut to maintain the same cross-sectional area of the floodway. Initial calculations required 24”+ armorstone with a section layer thickness of 5ft or more. This meant a 5’ layer of contaminated subgrade would need to be hauled away to a classified landfill and would prove very costly. Possible river fluctuations also meant an underwater installation could occur. Finally, the small site would have difficulty accommodating large excavation equipment.

TENSAR SOLUTION

According to Travis Carpenter, project engineer with Mactec, “We chose the mattresses because they were the most robust scour protection system with the thinnest cross-section. Our confidence level was high because of our previous experience with mattresses on other similar projects.” The co-polymer resin used to manufacture the mattresses is specifically designed to increase resistance to abrasion damage and perform better in cold weather. Any unforeseen damage to the mattresses can be repaired easily and quickly. An inspection visit 15 years after construction revealed no damage to the grid had occurred despite the harsh conditions from the Maine winters and the spring snow melts. .

Lewiston Riverbank Stabilization

Lewiston, Maine

MACTEC
Engineer

Clean Harbors
Contractor

Installation: Spring 2006
Product: 120 12” Triton mattresses
Lengths varied between 8ft-16ft

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