field applicability

The results of this integrated system testing can be applied to highway drainage ditches, spillways, dam and pond overflow systems and other vegetated channels exposed to high shear forces and intermittent, longer-duration velocities. This system replaces rip rap with a less expensive, low maintenance, aesthetically-pleasing green solution.

EXCLUSIVITY OF RESULTS

The results of the testing are exclusive to the materials utilized in this test. Specifically, no inference shall be drawn from this research review indicating suitability of any cellular confinement system other than the genuine GeoWeb® cellular confinement system. Due to the challenging nature of the projects for which this application applies, we strictly warn the reader of the potential for significant infill loss, project failure, and/or loss of property or life if substitutions are made including, but not limited to the GeoWeb® cellular confinement product and a properly prepared engineering design analysis.

CERTIFIABLE RESULTS

Results of this testing/research are certifiable and only available through Presto Geosystems.

RESEARCH SYNOPSIS

DISTRIBUTED BY:

Stabilized Spillway with GeoWeb®/TRM solution

Typical Ditch Erosion Problem

Stabilized ditch with GeoWeb®/TRM solution

RESEARCH OBJECTIVE

Measure performance of the GeoWeb® (GW) material combined with a turf reinforcement mat (TRM) (integrated system) with topsoil infill and vegetation under varying shear stresses and flow rates to quantify both hydraulic forces and corresponding soil loss.

The test consisted of a series of continuous one-hour flows over the GW-TRM system at incrementally increasing discharges. The performance threshold was defined as the point at which 0.5 inch (13 mm) of soil loss occurred.
No system instability was observed for shear stresses up to 15.9 lbf/ft$^2$ (77.6 kgf/m$^2$) and for average velocities up to 26.5 ft/sec (8.1 m/sec) with peak velocities over 29 ft/sec (8.8 m/sec). Due to facility constraints that prevented testing higher velocities than those reported, system failure limits were never found. The test results for the integrated system far exceed the limits of separately reported values of the Geoweb cellular confinement system and turf reinforcement mats with topsoil/vegetated soil.
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**certifiable results**

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