

# DOWNCHUTE CHANNEL PROTECTION



Traditional Downchute (Failed)



HydroTurf® Downchute

  
**HydroTurf**®  
Advanced Revetment Technology





ENGINEERED SYNTHETIC TURF

HYDROBINDER® INFILL (5,000 psi)

GEOMEMBRANE



HydroTurf® is a three-layered, engineered revetment system that was developed to meet the challenges of steep, high velocity channels on landfills and environmental sites. It is both a flexible and impermeable hard armor technology which has lower construction and maintenance costs than traditional armoring products (i.e., concrete, rock riprap, articulated concrete block (ACB), and pipe).

#### HydroTurf is Ideal for:

- ▶ Steep, channelized hydraulic applications with high flows and extreme velocities (up to 40 ft/sec)
- ▶ Downchute channels with complex geometry
- ▶ Protection against hydraulic jumps
- ▶ Replacement of traditional armoring products

HydroTurf is a proven revetment technology. It has been tested beyond the current standards for traditional hard armor and is successfully performing on over 150 installations. By offering excellent hydraulic performance, significantly less maintenance and natural-looking aesthetics, it provides a superior solution for landfill downchute stabilization, making ongoing, routine repairs a thing of the past.



## Easy and Cost-Effective to Install



1. Geomembrane Deployment



2. Engineered Synthetic Turf Deployment



3. Spread HydroBinder® Infill



4. Hydrate and Cure

Traditional hard armor solutions (i.e., concrete, rock riprap, ACB, and pipe) do not typically perform well under settlement conditions. Once they crack, sink, deform or break, the undermining begins, and they become ineffective and ultimately fail.

### HydroTurf® Provides Benefits over Traditional Armoring Solutions:

- ▶ Flexible solution that performs under ongoing settlement
- ▶ Saves significant construction and maintenance costs
- ▶ Installs fast for rapid stabilization
- ▶ Significantly improves water quality
- ▶ Reduces truckloads on and off the site
- ▶ Reduces carbon footprint



Failed Hard Armor Application

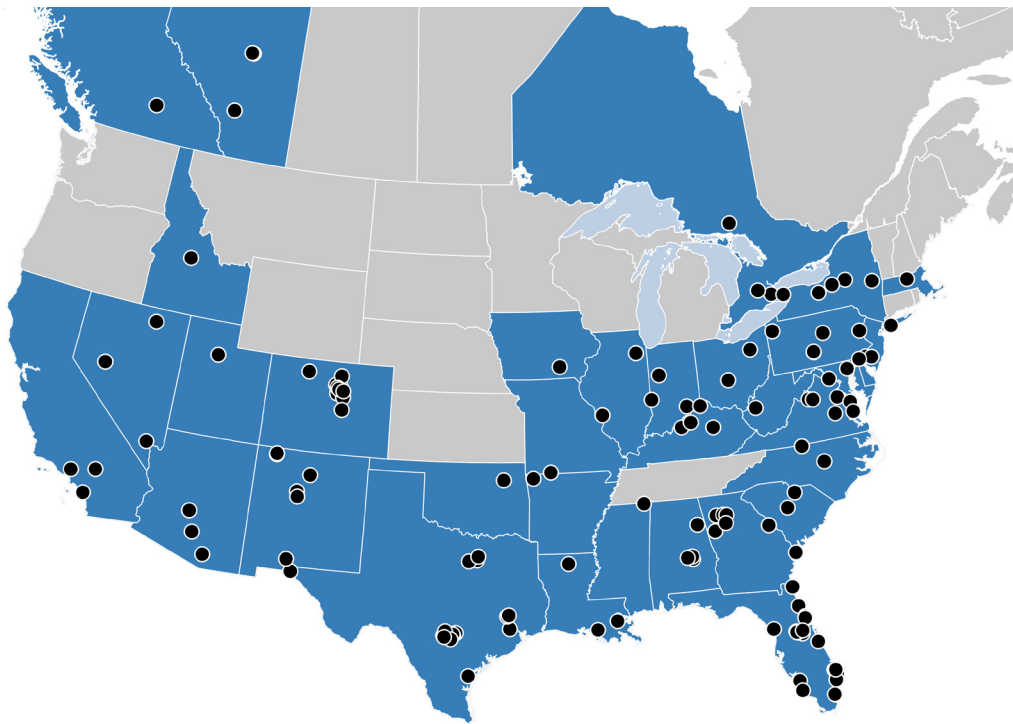


Failed Pipe Application





HydroTurf® has over 6,000,000 SF installed across North America.



HydroTurf® has been comprehensively tested at Colorado State University (CSU). CSU's laboratory has the largest flumes for hydraulic testing in the world. HydroTurf did not reach failure at a maximum steady state overtop velocity of **40 ft/sec.**



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Unearthing Solutions

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