



GEOBLOCK[®]

trail-hardening system for degraded trails



THE GEOBLOCK[®] TRAIL-HARDENING SYSTEM

Environmental damage from ATVs has increased as the use of four-wheelers becomes more popular for transportation and recreation. In some areas of Alaska, hundreds of miles of ATV trails cut across wetlands and streambeds, causing extensive damage to natural preserves.

At the Palmer Hay Flats State Game Refuge, ATV riders caused the loss of vegetative cover and habitat values. A 6.5-mile trail winding through the northern edge of the refuge is the only legal access for ATVs entering the popular waterfowl hunting area.

Rather than ban ATVs, a solution was sought to both benefit riders and preserve the wetland's natural vegetation. The Presto Geoblock[®] trail-hardening system proved to be the solution.

CASE STUDY SUMMARY 2



THE PROBLEM: Typical trail problems and damage to soil and vegetation.



TEST SCOPE/SOLUTION: The Geoblock[®] product was one of a variety of materials tested by the NPS and analyzed at a trail segment during the summer of 1999. Based on test results, 244 m (800 ft) of Geoblock hardening trail was installed in 2000.

providing sustainable solutions to trail stability problems



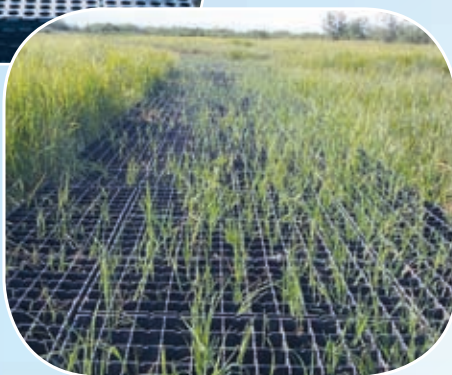
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TRAIL-HARDENING SYSTEM



Information obtained
from the *Anchorage
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National Park Service
project reports



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PROJECT: Palmer Hay Flats State Game Refuge Trail-Hardening System

Working with experts from the National Park Service (NPS) Rivers, Trails and Conservation Assistance program, officials experimented with a variety of protective trail materials they hoped would reduce impacts associated with ATV use. The test material chosen for this site was the Presto Geoblock® system. The Geoblock units are an open-celled plastic material, measuring 0.5m x 1.0m x 50mm (20-in x 40-in x 2-in).

The interlocking units create a load-distribution system designed to support vehicle loads and protect the underlying soil. The Geoblock system's open cells allow water to pass through, but protect the ground and soil from tire damage. The cells can also confine and stabilize topsoil or aggregate infill.

THE INSTALLATION

Because infill material was inaccessible and cost-prohibitive, no infill was used on the trail except in areas where the units were applied under water. In those wet areas, 20-50mm (3/4- to 2-in) washed gravel was spread into the units' cells, adding weight to a system that would otherwise float when submerged. The stabilized area runs through two shallow ponds near the beginning of the trail—an area so wet it was typically crossed wearing hip boots.

Installation was a cooperative effort by the AK Dept of Fish & Game and the NPS Rivers, Trails & Conservation Assistance Program. Crews laid the Geoblock units across an 800-foot stretch of the boggy trail, a main route into the refuge, in five days. An optimum laying pattern was implemented for the best resistance to movement under wheel loading. The mat system was secured by fastening adjacent units together with 20mm (3/4 inch) screws and plastic cable ties.

THE RESULTS

This reclamation project was funded by the state of Alaska with support from duck hunters and ATV dealers. As planned, indigenous grasses quickly regenerated through the permeable system, ultimately camouflaging the product with the natural environment while protecting the vegetation from damage. The Geoblock trail-hardening system is utilized for trail improvements across Alaska.



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