

# Case Study: Panama

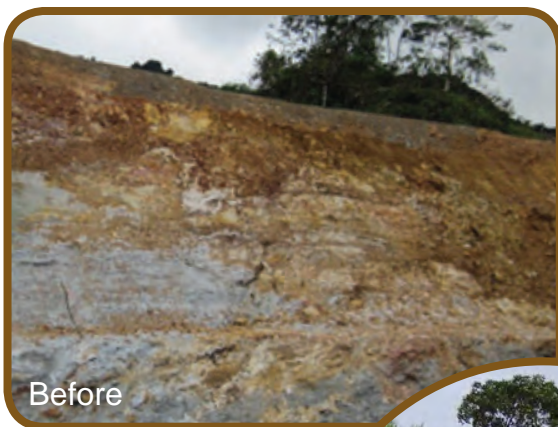


Before

*Stabilization of the banks of the Panama Canal is imperative in efforts to prevent soil particulates from entering the waterways. Soil can accumulate in the bottom of the canal, necessitating dredging to allow ships to effectively travel the waterway. NaturesOwn® BFM, was used to aid in the erosion control and soil stabilization.*



After



Before

*Steep slopes near roadways erode at a rate that will inevitably cause damage and eliminate access to roadways. Soil erosion runs into roadside streams that eventually finds its way back into larger bodies of water such as lakes or the ocean. Hydroseeding can help to stabilize these particles giving natural growth time to establish.*



After

Heavy rainfalls and steep slopes indigenous to Panama, the southernmost country in South America, tend to cause severe erosion to this area. Over time, there are effects from the erosion that is detrimental to their transportation and environmental systems. In an effort to stabilize access roadways and canalways, a plan was set in place to utilize a hydro-mulch product from Hamilton Manufacturing, Inc. that was ready for the challenge!

NaturesOwn® X9000 is a Bonded Fiber Matrix (BFM) hydro-mulch that was designed and manufactured to excel in erosion control in the toughest of climates and conditions. In this particular case, X9000 was applied in the jungles of Panama during the rainy season to slopes of 3:1 to 2:1. The coverage was 4000lb/acre and it was sprayed in a two step process.

The matrix had very little (less than two hours) drying time before it started to rain. During the following weeks after the applications, several heavy rainfalls hit this area. Although we recommend a minimum of 2-8 hours of drying time (depending on environmental conditions) to allow the tackifier to set, the matrix will start providing soil and seed protection as soon as it is applied.

Despite the heavy rainfalls and short drying time, once applied, the X9000 was able to hold the soil, seed, and fertilizer in place to ensure successful germination. The end result was another successful project in extreme conditions. Hamilton Manufacturing, Inc. would like to thank everyone who was involved in the project.

**Hamilton Manufacturing, Inc.**

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