

## Letting Nature Take its Course: Mirimichi Golf Course

HydraCM™ and Geoskin® aid in protecting the US's first platinum LEED certified golf course



*The LEED Platinum certified Mirimichi Golf Course, features high quality playability while also offering the highest in eco-friendly, green technology.*

### Background

In 2007, when the Big Creek Golf Course was on the auction block slated for development, its future was still unknown. The renamed Mirimichi Golf Course is greener than ever due to the vision of owner and pop-star Justin Timberlake. Over the past two years, the \$16 million eco-friendly renovation has revamped the 303 acre course located in Millington, just north of Memphis, TN into the first golf course to obtain a Leadership in Energy and Environmental Design Platinum certification - the highest honor in sustainable design. The goal of the course renovation was to offer players with the highest quality golfing experience while maintaining a natural, sustainable space. Mirimichi Golf Course includes a renewable energy field, recirculating watershed and streams, and is the first golf course to concentrate on calculating its carbon footprint. To obtain the LEED Platinum certification, the products used on the project site had to also exhibit the highest green standards. This was true of the erosion control and vegetation establishment products selected for use on the site.

### Erosion Control Solutions

When it came time for temporary stabilization and permanent revegetation of the newly graded areas surrounding the 18-hole course, Mirimichi worked with Jen-Hill Construction Materials in Hendersonville TN, to select the erosion control solutions. After carefully analyzing the needs of the project site, two hydraulically-applied mulches were chosen.

The North American Green HydraCM™ Steep Slope Matrix™ and Geoskin® hydraulic-mulches were selected for several reasons, but primarily for their erosion control performance, ability to establish vegetation quickly, and for the fact that they both contained all-natural fibers and were regionally manufactured products. All qualities that aid in gaining LEED points. HydraCM and Geoskin are straw and cotton plant material based fiber mulches that contain a blend of tackifiers to allow for soil binding. Generally, Geoskin is recommended for moderate sloping areas up to 3:1 (H:V) while HydraCM can be used on slopes up to 2:1. The straw and cotton plant fibers create an interlocking matrix that creates a



*Wet spring conditions hastened the need for erosion control and revegetation measures.*

porous matrix over the soil fibers. The matrix allows for excellent soil erosion control while also allowing new vegetation growth to quickly establish through the mulch.

### Installation

Starting in April 2009, HydraCM and GeoSkin were applied to the Mirimichi Golf Course in the areas to be naturalized with native species. HydraCM was applied to the steeper sloping areas and GeoSkin was applied to more moderate areas. The products were mixed in a mechanically-agitated hydroseeding tank and applied in a one-step process by which the seed was mixed and applied at the same time as the mulch. The HydraCM and GeoSkin were mixed at a ratio of 50 lbs of mulch to 100 gallons of water. This ratio, which requires less water-to-mulch than some hydromulches on the market which allows the contractor more mulch to mix per tank load thus reducing the overall installation time, and ultimately providing both a time and cost savings.

HydraCM was applied at a 3000 lbs/acre rate while GeoSkin was applied at 2000 lbs/acre. In total, approximately 15 acres of HydraCM and 22 acres of GeoSkin were applied.

Since the hydromulches are intended for temporary erosion control, the goal was to stabilize the slopes long-term with natural plant species that would be low maintenance yet still beautiful for those experiencing Mirimichi Golf Course greens. A wide variety of wildflowers, lovegrass and other natives were used to protect the slopes. Since the course was slated to open in July 2009, that left only 3 months to obtain vegetation growth. HydraCM and GeoSkin, with their straw and cotton plant fiber matrices, have shown quick grass growth and establishment in many field applications.

### Results

Within weeks Mirimichi was greening nicely both on and off of the course. The naturalized areas were such a success that Mirimichi was honored by the Audubon International with a "Classic Sanctuary" classification, the first U.S. project to receive such an honor. This classification is rewarded to renovation or restoration projects that add and integrate wildlife conservation, habitat restoration and enhancement, water conservation and water quality protection, and other areas of environmental protection and improvement.

With the success of the project to date, Mirimichi has plans to expand its green offerings, with the hopes of adding a second 18-hole course. They also plan to offer additional sustainable products and technologies as the course grows. For now, however, they are letting Mother Nature take her course.



*Views of several naturalized areas encompassing the Mirimichi fairways. Native wildflowers, lovegrass and other natives provide an aesthetically pleasing view that is wildlife friendly.*