

Hydro-Blanket® BFM and Terra-Matrix™ SMM Case Study:

Profile Products Helps Prevent Mudslides From Threatening California Community

After fire ravages park, officials must quickly protect burned slopes to keep homes and roadways safe



Stopping the Soil

In May of 2007, fires torched more than 1,000 acres of Los Angeles' coveted Griffith Park, setting the stage for potential mudslides during the rainy season. The park, located on a series of hillsides, offers magnificent views of downtown L.A. and is frequented by thousands of visitors each year. Without precious vegetation to prevent soil erosion and potential mudslides, officials had to take immediate action to protect the roadways and homes below.

Because of Profile Product's previous success helping to restore other California fire-scarred

landscapes, officials selected erosion control and revegetation technologies produced by Profile to quickly and effectively prevent a disastrous mudslide.

"Government officials had a genuine urgency to find an immediate solution to stop the threat of severe soil erosion in a large area of the park," said Marc S. Theisen, vice president of erosion control solutions for PROFILE Products LLC. "From the outset, we knew that the enormity of this project and the tight installation timeline would present us with plenty of challenges."

Responding Quickly

Time was of the essence. Officials immediately began putting together their criteria and general plan for addressing the overall soil erosion potential caused by the spring fire. In all, there were 31 government entities from federal, state, local and community departments involved in the Griffith Park Fire Recovery Team.

"There were several concerns these officials had to address," said Theisen. "First was choosing materials that would quickly bond to soil and prevent erosion even under heavy rainfall. Further, there was a strong desire to allow the native vegetation to reestablish with no introduction of seeds or plant materials from outside the park boundaries. The revegetation techniques had to be free of any seed and demonstrate sufficient longevity (6-12 months) in order for natural vegetation to regenerate on steep, fire-ravaged slopes."

Quickly managing a difficult logistical situation was critical to success. Once the project was awarded, Profile conferred with contractor, Western States Reclamation, Inc. of Frederick, Colo., and distributor, Watersaver Company, Inc. of Commerce City, Colo., to discuss how to address all of the issues at Griffith Park.

Western States, Watersaver and Profile had to work together efficiently to meet the aggressive project demands. With nearly 500 acres of fire-damaged land to treat in a very tight time frame, producing and transporting enough material to the site was the first challenge to overcome. Also, making sure all of



the material arrived at the right time was another obstacle—Western States had to receive several truckloads of product a day during a one week period.

Applying Effectively

The Griffith Park solution required fast application of biodegradable and long lasting materials. Two proven Profile products met or exceeded all the criteria for the project: Profile's Hydro-Blanket® BFM (Bonded Fiber Matrix) and Terra-Matrix™ SMM (Stabilized Mulch Matrix).

Officials applied Terra-Matrix SMM to the less severe terrain, while determining that Hydro-Blanket BFM was the perfect solution on steeper slopes. Workers configured customized application rates for both products to adequately accommodate the range of slope gradients encountered within the project boundaries.

Both products offer inherent advantages over field-mixed wood fiber and organic tackifiers because they include Thermally Refined® wood fibers. According to Theisen, "Thermally Refined wood fibers provide better coverage than non-thermally refined fibers. The use of these products greatly enhanced the ability of the contractor to meet the 100 percent coverage requirements of the project specifications. These products also employ a cross-linked tackifier which reduces water solubility, increases bond strength and extends longevity."

With the large quantity of material involved, having pre-blended products greatly simplified logistics for Western States Reclamation. Pre-blended products eliminated storage of additional tackifier and contractors only had to add water to the pre-mixed formulations.

As required by the City of Los Angeles, both Profile products were environmentally safe and biodegradable. They had previously demonstrated great soil-bonding performance on steep slopes, and the functional longevity needed for this application.

To adequately cover steep slopes and large areas of inaccessible terrain, and also adhere to tight application

windows, Western States Reclamation contracted the services of Erickson Air-Crane, Inc. out of Central Point, Ore. to apply the product aerially.

When the helicopter arrived, there was an immediate challenge to coordinate 20 people involved in the application of materials. Some workers handled operation of four large (3000-4000 gallon) hydroseeding machines, while others mixed and loaded materials to ensure the smooth operation of aerial application. Helicopters applied two thousand gallons of the hydraulic slurry every three to four minutes. Approximately 90 percent of the project was completed in only 10 days.

Community Saved

The swift application of products successfully eliminated the threat of mudslides at Griffith Park. Theisen noted that the project was a good example of how Profile collaborated with an effective team to integrate people, technology and services to successfully complete a very large project in a timely manner.

"Everybody involved in this project worked incredibly hard and did a magnificent job," said Theisen. "Western States turned this job in a very short time window and in the process supplied and successfully installed products that will effectively bond to the soil and help prevent any major soil erosion problems such as mudslides."

"Watersaver Company Inc. did an outstanding job coordinating the logistics for this project," he added. There is no way the project would have come together as smoothly as it did without their assistance."

October is the peak of the erosion control construction season throughout the United States and Canada and product is often in demand. Theisen added, "Our manufacturing personnel really rose to the occasion and produced a substantially large quantity of the required products in a short period of time."

Should devastating fires threaten communities with a second natural disaster such as a mudslide, Profile

Products and its distributors have proven they can quickly marshal the products and resources to secure a site and begin the healing process.

KEY PRODUCT PROPERTIES

Terra-Matrix™ Stabilized Mulch Matrix

Tests prove Terra-Matrix controls erosion on slopes exceeding 3H:1V in heavy rains.

- Safe for the environment and wildlife, the cost-effective, hydraulically applied blanket forms erosion-resistant protection on moderate slopes and building pads for up to 3-6 months.
- Pre-blended combination of Thermally Refined® wood fibers, cross-linked tackifiers and activators anchor the fiber matrix to the soil surface requiring no netting, staples or lifting.
- The non-toxic, biodegradable blanket contours to the surface ensuring intimate soil contact which prevents polymer leaching.

Hydro-Blanket® Bonded Fiber Matrix

Tests prove Hydro-Blanket controls erosion on steep 1:1 sites subject to heavy rains.

- Fast, effective hydraulic application on steep sites is less expensive to install than blankets or sod, and provides a better yield than other BFM's.
- Effective for 6-12 months, it combines Thermally Refined wood and multi-dimensional tackifier to achieve greater water-holding capacity, promote more complete germination and faster vegetation establishment.
- Uses a cross-linked hydro-colloid tackifier to securely anchor the fiber mulch matrix to the soil surface which dries to form a breathable, environmentally safe blanket that is fully biodegradable.



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