STOP the soil

California fires spark a collaborative mudslide prevention initiative

By Marc S. Theisen, CPESC

The 2007 fires that ravaged California torched more than 1,000 acres of the city 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 erosion and potential mudslides, officials knew they had to take immediate action to prevent damage to roadways and homes.

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. From the outset, involved parties knew that the enormity of this project and the tight installation timelines would present plenty of challenges.

Steep slopes and inaccessible terrain were among the reasons project leaders opted to apply soil stabilization products aerially.

Combining the Right Resources

The process began when city officials began putting together their criteria and general plan for addressing the overall soil erosion potential caused by the spring fire. In all, 31 government entities from federal, state, local and community departments were involved in the Griffith Park Fire Recovery Team.

There were several concerns these officials had to address. First was choosing a product that would bond to soil, prevent erosion under heavy rainfall and persist for up to one year. Further, there was a strong desire to allow the native vegetation to re-establish with no introduction of seeds or plant materials from outside the park boundaries. Thus, the revegetation techniques had to be free of foreign seed and demonstrate sufficient longevity.

Profile Products LLC, Buffalo Grove, Ill., conferred with reclamation

contractor Western States Reclamation Inc., Frederick, Colo., and distributor Watersaver Co. Inc., Commerce City, Colo., to discuss how to address the issues at Griffith Park. All companies felt that to be involved in such a large-scale, environmentally sensitive project, it was crucial to do it right the first time.

Selecting the Right Products

The two products selected for the project were Profile's Hydro-Blanket bonded fiber matrix (BFM) and Terra-Matrix stabilized mulch matrix (SMM). The SMM was applied on the less severe terrain, and the BFM was used on the steeper areas. Both products are environmentally safe and biodegradable, as required in the project specifications.

Due to the large quantities of material involved, having pre-blended products greatly simplified logistics for Western States Reclamation, as the group did not have to worry about where to store multiple products and only had to add water to the pre-mixed formulations.

The use of these products greatly enhanced the ability of the contractor to meet the 100 percent coverage requirements of the project specifications. The solutions employ a cross-linked hydro-colloidal tackifier, which results in increased bond strength and extended longevity over conventional organic tackifiers.

Implementing the Right Logistics

Difficult project conditions meant the fire rehabilitation team had to act quickly and efficiently. With 500 acres of fire-damaged land to treat at the park and a very tight time frame, getting enough material to the site was the first challenge.

Once the project was awarded, Western States Reclamation, Watersaver and Profile had to work together efficiently to meet the aggressive project demands and to complete the project prior to the onset of the autumn rainy season. Due to the large amount of material required, the contractor needed to receive several truckloads of product a day during a one-week period.

Team members performed assigned loading, mixing and operating tasks in sync to achieve a successful hydroseeding application.

Due to the steep slopes, large areas of inaccessible terrain, tight application windows and a desire by the city of Los Angeles to minimize any disturbance of native vegetation, the reclamation contractor secured the services of Erickson Air-Crane Inc., Central Point, Ore., to apply the product aerially.

When the helicopter arrived to begin application, there was an immediate challenge to make sure the 20 people involved were all in sync. While some workers were assigned to the operation of hydroseeding machines, others were involved in the mixing and loading of materials to ensure a smooth process.

Approximately 90 percent of the project was completed in 10 days. The quickly applied products bonded to the soil and prevented significant soil erosion problems over the winter rainy season. SWS

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