

## Selby's and Profile Products Lead Reclamation of Third-Largest Forest Fire in California History



### Devastating forest fire

On August 17, 2013, a hunter's illegal fire blazed out of control and started what would become the third largest forest fire in California history. In the end, a quickly mobilized Selby's Soil Erosion Control and a fast-curing Bonded Fiber Matrix (BFM) from Profile Products would stabilize charred slopes and prevent potential debris flows from blocking the roadside of a well-traveled state highway.

The devastation of the Rim Fire, named after its location near the Stanislaus National Forest "Rim of the World" vista point, was staggering. Within two months, the fire burned more than 257,000 acres across 402 square miles of the national forest. More than 5,000 firefighters were dispatched to put out the fire, which did damage totaling more than \$127 million.

Smoke from the massive fire caused unhealthy air conditions as far north as Lake Tahoe and Reno, Nevada, some 120 miles away. A State of Emergency for the City of San Francisco was declared, because fire damaged

power infrastructure that served the Bay Area. Wildlife officials had to tend to displaced animals, and logging was needed along 52 square miles to remove roadside trees hazardous to public safety.

In particular, a 17-mile stretch of State Route 120 from Buck Meadows to the entrance of Yosemite National Park engulfed by the fire was in dire need of revegetation and erosion control.

### Slopes along highway critically damaged

The decimated stretch of state highway was a critical thoroughfare, taking tourists to and from one of the most popular national parks in the country. But the integrity of that highway was now in question.

Drainage systems were of critical concern. The area had numerous culvert pipes that carried water from one side of the roadway to the other, but the inlets were undersized for today's standards. There was a fear that they would easily get plugged with ash and sediment and cause flooding on the roadway if the bare soil from

the burned slopes was not adequately secured. Additionally, many of the severely burned trees had the potential of falling or sliding onto the roadway.

Selby's Soil Erosion Control was awarded the rehabilitation project and they turned to Profile Products for the best solution to curb erosion and revegetate the roadside slopes to keep the highway clear of debris and safe for motorists.

"This was an all-hands-on-deck project for us because of the enormity of its scope," said Jay Selby, owner of Selby's. "Because so much of the project was about preventing hazards as quickly as possible, we had to work with partners we could trust with products that would get the job done right the first time."

### Slopes rehabilitated with 'blanket in a tank'

Selby's chose to hydroseed the 17-mile stretch with Hydro-Blanket® Bonded Fiber Matrix (BFM). Spraying 200' up and down the right of way slope with large capacity machines, Selby's crews were able to stabilize 5–10 acres per day. Hydro-Blanket BFM sprays on as mulch, but dries to form a breathable blanket that bonds more completely with the soil. Effectively reducing the likelihood of erosion, it saves time and money compared to erosion control blankets. It's the only BFM to combine 100% recycled Thermally Refined® wood fiber and multi-dimensional polysaccharide-based tackifiers for greater water-holding capacity, more complete germination and faster vegetation establishment. Plus, it completely biodegrades and is non-toxic.

"Hydro-Blanket is like a blanket in a tank, only better," says Doug Graham, with

Profile Products. "It's especially useful for projects like a forest fire rehabilitation where time is of the essence to prevent further environmental damage and cost more money."

Depending on the severity of the burn and the steepness of the slope, Hydro-Blanket was hydraulically applied at a rate between 2,000 and 4,000 pounds per acre. Additionally, trash racks were installed in steep ravine culvert inlets to further curb sediment runoff.

On slope areas where potential slides were greatest, Selby's installed coir netting first before hydroseeding with Hydro-Blanket BFM and a mix of native grass seed.

To secure the drainage areas, Selby's installed rip rap around all of the area's inlet culvert pipes and controlled the speed of sediment traveling toward them by using check dams and erosion control blankets. Custom-built debris racks were placed in the flow lines to combat culverts from plugging.

### Zero slope failures, no mudslides after application

The hydroseeding work was finished in early November, just before the anticipated winter rains rolled in. The project was monitored closely throughout the winter season. There were zero slope failures, no significant mudslides, and no roadside flooding, which provided smooth travel for tourists heading to Yosemite.

"Zero failures led to a forest in full bloom the following spring, and the erosion control project came in under budget, which makes everybody happy," says Graham.



### KEY PRODUCT PROPERTIES

#### Hydro-Blanket® Bonded Fiber Matrix

Tests prove Hydro-Blanket is 95% effective at controlling erosion on steep slopes.

- Fast, effective hydraulic application on moderate to steep sites.
- Provides better yield and more cost-efficient coverage than other BFMs.
- Less expensive and faster to install when compared with blankets or sod.
- Combines Thermally Refined® wood and multi-dimensional tackifier to achieve greater water-holding capacity and promote more complete germination and faster vegetation establishment.
- Dries to form a breathable, high-strength blanket which is environmentally safe and fully biodegradable.

#### Typical Application Rates:

| SLOPE       | APPLICATION RATE |
|-------------|------------------|
| < 3:1 slope | 3000 lb/ac       |
| 2:1 slope   | 3500 lb/ac       |
| ≤ 1:1 slope | 4000 lb/ac       |



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