

When the Fire's Out

Hydroseeding, hydromulching, and other techniques on wildfire-damaged Sites

Red and orange filled the sky last autumn in southern California, but it was the unrelenting flames of extensive wildfires, not leaves changing their seasonal colors. When all that is left in wildfire-damaged areas is ash and charred soil, is it better to seed or just help nature take its course by providing a stable environment for the seed left in the soil to thrive? This is one of many questions posed in the state as workers mobilize their erosion control efforts.

The Ammo Fire in San Diego County burned more than 21,000 acres, the Santiago Fire in Orange County blazed across 28,400 acres, and the Poomacha Fire in San Diego damaged more than 49,000 acres, according to statistics released by the California Department of Forestry and Fire Protection. In October, CNN reported that as a result of the wildfires, more than 500,000 people were forced to evacuate their homes in the hardest-hit area of the state, San Diego County. The bill for such destruction is steep: The October 2007 wildfires caused more than \$1 billion in damage, according to the Arlington, VA-based conservation organization, The Nature Conservancy.

Erosion has already occurred in some areas of southern California that at press time had experienced a large rain event, explains John Munn, a Sacramento-based soil scientist with the California Department of Forestry and Fire Protection. Munn served as an advisor to the Burned Area Emergency Response (BAER) team that was involved with the Canyon Fire in Malibu, CA.

“It’s worse than average,” he says of the 2007 wildfires. “I don’t know that you could say it was worse than 2003. It’s a bad year for anybody whose house burns down.”

Following the October 2007 California wildfires, California Governor Arnold Schwarzenegger called upon the state’s Blue Ribbon Fire Commission to assess the next steps that will be taken at all governmental levels to prevent and battle future fires. In November, the House-Senate Conference Committee approved \$500 million for risk recovery, emergency fire suppression, and recovery needs related directly to these southern California wildfires. Several conditions in fall 2007 created the ideal setting for the spread of these blazes.

“Southern California is a fire chaparrals area,” says Ron Dietz, president of Dietz Hydroseeding of Sylmar, CA, explaining that there were extreme Santa Ana wind conditions blowing 70 miles per hour, making the spreading fires virtually unstoppable. “These are usually dry winds in very low humidity. “They increase the temperature. We’ve had a drought situation. Even some of the

areas that burned in 2003 re-burned. The issue is that they are building homes more into these areas that are native wildfire areas. It's like building in tornado alley. Where you decide to build your structure is impacted by the natural conditions."

When wildfire does produce extensive damage, as is the case from the October blazes, temporary measures may be used to protect areas vulnerable to mudslides or ash washed down a hillside by heavy rains. Straw wattles or silt fencing may be needed for erosion protection, depending on the situation's severity, according to Gary Weems, president of Hydro-Plant. Sand bags, too, may be used when there is a risk of heavy rain. In high-flow water areas, erosion control blankets would be a consideration, says Dietz, whose company is also working with residents of Orange County affected by the Santiago Fire.

"Sand bags or gravel bags can be used at the bottom of slopes in place of straw bales," he says. "When you get into straw bales, they really should be maintained. That's another consideration. If any material gets behind that, it fills it up. Then a big rain comes, and it breaks loose and goes all at once. That's why they really don't like to use it until they really have to."

For post-fire recovery sites where hydroseeding is an option, seed choice is very important to the well-being of the area. Workers at S&S Seeds, a wholesale native seed and erosion control supplier based in Carpinteria, CA, provide guidance for companies working to hydroseed post-fire recovery sites.

"We are filling various seed mix prescriptions, ranging from true California native species like Cucamonga brome and small fescue to non-native sterile cover crops like QuickGuard," says Bruce Berlin of S&S Seeds, referring to recovery efforts from the 2007 fires. "Each different agency or region is developing its own particular seed mix components based on the site criteria and plant pallet. Our company has the ability to help them with the seed counts, seeding rates, and supplying the mix components. We are the largest supplier/producer of native seeds with origins in southern California. Timelines and product availability do enter into the criteria for both product and seed selection. You have to be able to supply the materials immediately so the slopes can get protected and covered prior to the onset of fall rains."