

# ERTEC Environmental Systems

Protecting Global Lands and Waterways™

## Case Study S-Fence™

Post Fire Soil Stabilization



- > Lower Project Costs
- > Better Performance
- > R R R™

- ✓ Recycled
- ✓ Reusable
- ✓ Recyclable



ERTEC installed after debris removal



**Application:** Post-Fire - Soil Stabilization

**Product:** ERTEC Perimeter & Slope Protection Products

**Location:** Running Springs, California

**Installer:** Sukut Construction, Inc.

**Customer:** San Bernardino County Public Works

**Installation:** November 2007—March 2009

**Background:** Wildfires are a common occurrence in the South Western United States and much of the

area's biologic systems are a result of fire, flood, and regeneration cycles of plant communities. On average, first-year post-fire watershed sediment yield is 35 times greater than comparable unburned levels. This accelerated erosion can cause site degradation and threatens life, property, and infrastructure. To reduce undesirable consequences of post-fire accelerated erosion a program of slope and stream channel erosion and sediment control measures should be considered. Remediation should not be pursued in all areas affected by the fires. Not only are the costs prohibitive, but natural regeneration typically occurs at a better rate than a human effort to augment it. Typically less than 2% of the land area affected by fire should receive Sediment and Erosion Control treatments. A common approach is to weigh the likelihood of hazards against the severity of its impact, to determine which sites have highest priority for mitigation. Historically, most high priority sites occurred very close to human populations.



**Mitigation Measures:** The wide range of conditions encountered following a fire requires a variety of Best Management Practices (BMPs). The following criterion should be considered when selecting BMPs for installation in hazard areas: long term effectiveness; total cost including long term maintenance and replacements; environmental impacts (reusability, recyclability, green house gas emissions, landfill impacts); regulatory acceptability; public acceptability; aesthetics; and suitability for site.

**ERTEC Perimeter and Slope Protection Products:**

- Are an important part of a comprehensive BMP system to keep soil in place
- Allow water flow-through and significantly reduces water velocity while providing particle filtering
- Are made from recycled, reusable, and recyclable HDPE.
- Are used as Slope Interruption Devices. On slopes, ERTEC should be used in conjunction with a soil stabilizing fiber matrix. ERTEC can be used to stabilize barren slopes by shortening the slope length and steepness, reducing soil creep, and by slowing and spreading and filtering water flow. ERTEC helps prevent sheet erosion as well as rill and gully development, which occurs when run-off flows uninterrupted down a slope. Gullies can cause a loss of large amounts of soil and usable land.
- Provide long term use and reusability (up to 5 years) with excellent aesthetics and low total costs.



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**Alternatives**     Wattles or Silt Fence with a high level of maintenance and replacements over three years

**Solution**         10" S-Fence was trenched 4 inches. Staked in areas where concentrated flow is expected. Overlapped segments are fastened with small hog rings and fastened to stakes with drywall screws. Installation Instructions and Guidelines are available at:

[www.ertecsystems.com](http://www.ertecsystems.com).

**Summary and Results**

Project duration: November 2007 through March 2009. As home owners stabilized their lots, ERTEC was removed and relocated. "Approximately 50,000 feet of ERTEC was originally purchased and was used multiple times. The total footage installed was 220,000 feet. On average, the material was removed as home owners stabilized their lots and reinstalled about 4 times to new locations. As the project comes to a close, the county is storing the material for future use." - **Mike Alberson**, Senior Environmental Engineer, Geosphere/CEL Inc

**Customer Quotes**

"The favorable aspects to ERTEC's products are three-fold: they will provide long term soil stabilization until vegetation can return which, in this area, can be more than one growing season. They are lightweight and compact—much less labor and transportation logistics required to install in these remote spots. And thirdly—because they allow water to flow through, we have had very little undercutting and maintenance which is common to wattles and silt fence." - **Mike Alberson**, Senior Environmental Engineer, Geosphere/CEL Inc

"The most important reasons why the County of San Bernardino chose ERTEC's systems were their longevity, ability to relocate and reuse, and recyclability. The products require less carbon dioxide to transport into the mountains and the logistics to deploy are significantly less than wattles.." - **Dan Ilkay**, County of San Bernardino Public Works

"ERTEC was very easy to install—very quick." - **Toney Green**, Lead Installer, Sukut Construction

**Proven Benefits**

Time and time again, ERTEC has delivered higher performance, better environmental aspects, and dramatically lower total costs.

