

# ERTEC Environmental Systems

Protecting the Integrity of Global Lands and Waterways™

## Case Study Combo Guard™



- > Lower Project Costs
- > Better Performance
- > ZERO Waste
  - ✓ Recycled
  - ✓ Reusable
  - ✓ Recyclable



**Application:** Drain Inlet Protection on a 6 mile pipeline installation  
**Product:** ERTEC Combo Guard™ for curb-grate combination inlets  
**Location:** Folsom to El Dorado Hills, California  
**Customer:** PG&E Pacific Gas & Electric—Utility Company

**Combo Guard** is a low cost, four layer system designed to reduce sedimentation and debris into combination curb & grate storm drain inlets during construction. It is an important part of a comprehensive best management practice approach for site sediment control. The one-piece system protects both the horizontal grate and vertical curb opening. The system is designed to optimize the important trade-off between safety (allowing storm water to flow off the street) and removing sediment. The integrated filter has a vertical height of 2 inches to allow water to bypass for high flow conditions. The system filters storm water above the ground easing visual inspection and maintenance. Because the system is above ground, installation and maintenance is rapid. During installation, the grate does not need to be removed, reducing incidences of installer back strain. Four standard sizes fit most combo storm drains. The system has a long life, is resistant to traffic, and highly reusable. The units are made from durable and recyclable HDPE.



Rapid installation

**The Challenge:** Pipeline or multi-phase projects require the installer to continuously move sediment control systems as the project progresses. Often, systems cannot be reused, or are difficult to remove and re-install.

**Alternatives:** Current best practices include insert filters, or filter bags that envelop the grate, or various other non-technical methods (wattles, sandbags, etc). Insert filters and filter bags that envelop the grate require the removal of the grate which is often difficult, requires more than one person, and can lead to the possibility of back injury. Insert systems can present difficulties when they need to be cleaned—it is often a difficult or impossible undertaking. The non-technical approaches can lead to back-ups at the drain inlet, extra debris inside the storm drain, and are usually often not reusable.

**Solution:** Combo Guards are installed with gravel bags on each side of the grate, or attached to the grate with tie-wire at the corners. The gravel bags serve to anchor the system, and slow water before it reaches the filter.

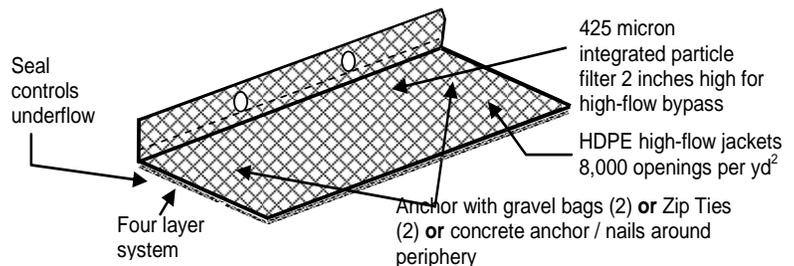
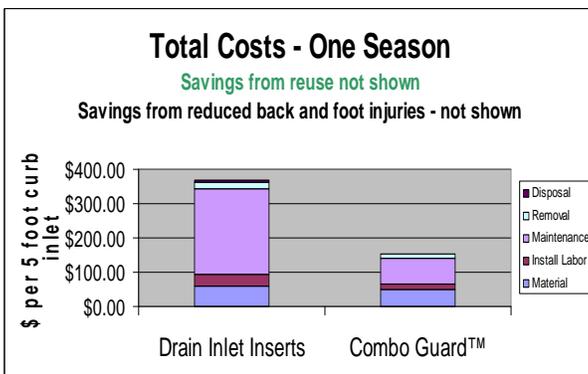
### Summary and results:

“Combo Guards worked great for us on this project. They were so easy to install, maintain and reuse and we never had to lift heavy grates. We used Combo Guard in several cities and the inspectors liked the product.” - Lyn Hudgens, Safety Representative, General Construction-Gas, PG&E

**Economics:** Combo Guards and associated gravel bags typically have a lower first cost than other systems. Reduced installation costs, reduced maintenance costs and reusability dramatically add to the savings.



Post storm— easy to monitor, clean, remove.



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