

ERTEC Environmental Systems

Protecting Global Lands and Waterways™

Case Study Perimeter Guard™



- > Lower Project Costs
- > Better Performance
- > Zero Waste
 - ✓ Reusable
 - ✓ Recyclable



Application: Home Construction: Perimeter Protection
Product: Perimeter Guard™
Location: Rio Vista, California
Customer: Shea Trilogy

Perimeter Guard changes the way sediment is controlled on-site for homebuilders:

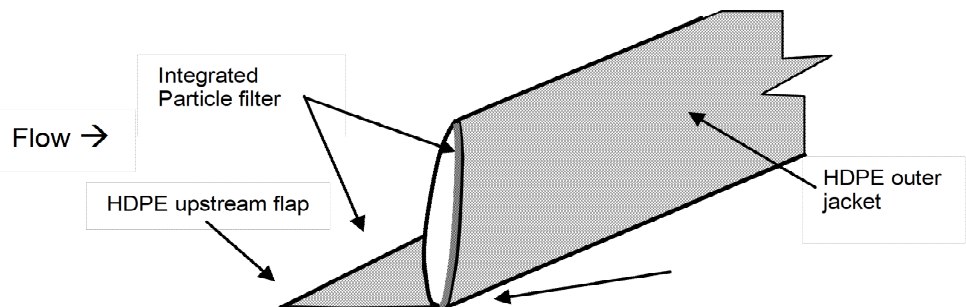
- High overhead mechanized crew not required for installation and maintenance
- Perimeter maintenance averages less than 2 hours a week (with 20 houses under construction).
- When pulled-up by landscapers after final grading, greater than 80% of the material can be stockpiled for reuse.
- Drastically lower overall costs—less replacements, less maintenance, less on-site sweeping.
- Very high environmental sustainability—nothing to landfills



Perimeter Guard:

- Is an important part of a comprehensive BMP system to keep soil in place
- Allows water flow-through and significantly reduces water velocity while providing particle filtering
- Is made from recycled materials), reusable and recyclable HDPE
- Is reusable for to 4+ years

The Challenge: Home Construction is highly unforgiving to Storm Water BMPs due to the high sub-contractor count, length of time between land development and landscaping phases, very high foot and vehicular traffic, trenching around the pads and curbs, installation of utility posts, mail pads, etc. Current Best Management Practice is to use wattles, blankets or silt fence to keep sediment from moving off-site. In this application, wattles or blankets are quickly destroyed in foot or vehicular traffic and become very heavy and difficult to move after absorbing storm water. Wattles become ineffective after saturation, by damming and allowing undercutting. As the straw decays and slumps, storm water overtopping becomes common. Silt fence deteriorates in months with wind and UV exposure requiring regular maintenance and replacements. These traditional BMPs are costly to dispose of and usually cannot be reused. The results of this project demonstrate that Perimeter Guard can overcome the above concerns, provide better sediment control and a significant economic advantage for the home builder. (over)





Alternatives

- Wattles with an increased level of maintenance and multiple replacements (sometimes up to 5 sets) of wattles (including removal, disposal, replacement, installation)
- Silt fence with an increased level of maintenance and replacements

Solution

6.5" +/- 0.5" Perimeter Guard was attached with 6" Nails (60D Bright, Common), 3 per 7 foot length – more if necessary. Installation Instructions and Guidelines are available at: www.ertecsystems.com.



Summary and Results

Many promised benefits were achieved:

- Solids in rainwater run-off to the street and eventually to the storm drain were significantly reduced.
- Funds spent to replace and maintain barriers was reduced significantly—by more than 75% - a single installation survived the phases of construction and stood up to the abuse with normal maintenance and then was reused such that on average 2 houses were built with each set of Perimeter Guard.

Customer Quotes

- "We usually go through 3 to 5 sets of wattles (2 to 4 complete replacements) through the course of home construction. The PG stayed in place, from land development to landscaping, and then reused for another cycle." - **Wayne Collins, Shea Trilogy Field Manager**
- "If Perimeter Guard gets banged up, they can be reformed and reinstalled." - **Wayne Collins**
- "When there is a damaged piece – we don't have to replace 25 feet...we can usually repair it and put it back into service." - **Kirk Williamson, Shea Trilogy Field Manager**
- "Perimeter Guard is easy for everyone to work around." - **Kirk Williamson**
- "The local storm water inspector was impressed with this new solution." - **Wayne Collins**

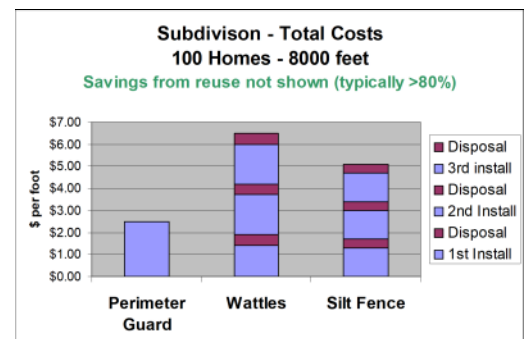
Keys to Success

There are methods that can create a "BMP Favorable Culture" at the job site and ensure long-term performance of the BMPs.

- When the trades see that the BMPs are maintained in good condition it's more likely that a "BMP Favorable Culture" will develop.
- The site supervisor is a critical influence in the success of any BMP. His or her behavior and understanding of the system will set the tone.
- It's critical for the BMP Installation and Maintenance team at the site to understand all aspects of the BMP.

Key Benefits to the Home Builder:

- Reduces risk, through better sediment control performance
- Despite higher up-front-costs, ERTEC Perimeter Guard significantly reduces sediment control costs (including materials and labor through all phases of construction)



Proven Benefits

ERTEC Case Study
Home Construction