

ERTEC Environmental Systems

Protecting Global Lands and Waterways™

Case Study

Perimeter Guard™

Perimeter Protection



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

- ✓ Recycled
- ✓ Reusable
- ✓ Recyclable



Application: Home Construction: Perimeter Protection
Product: Perimeter Guard™
Location: Manteca, California
Customer: Morrison Homes
Installation: 2006—ongoing

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

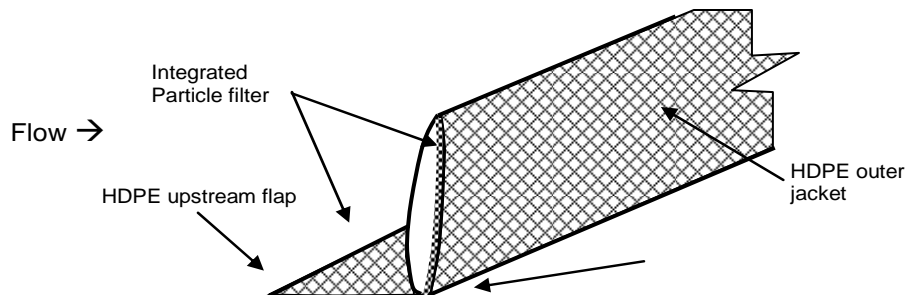


Perimeter Guard:

- 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 (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)



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Several U.S. and foreign patents apply



Alternatives

- Wattles or blankets with an increased level of maintenance and multiple replacements (sometimes up to 5 sets—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

Installation was completed in early October, 2006. 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 60% - a single installation survived the phases of construction and stood up to the abuse with normal maintenance.

Customer Quotes

- "I was impressed at how well Perimeter Guard held up during home construction. We did not spend additional funds to purchase additional material for maintenance or replacements."
- "The local inspector was positive about our site conditions and the ERTEC material."
- "ERTEC has been onsite for nearly one year—and it looks like we will not need to purchase material for the upcoming storm season. Historically we would usually go through 3 sets of wattles during home construction—one put down by land development, and then two sets purchased by the production team. At the start of the storm season—October 15, we usually need to refresh the entire perimeter with new material. We will not need to do that this year." Luis Coelho, Project Manager, Morrison Homes—Manteca, California

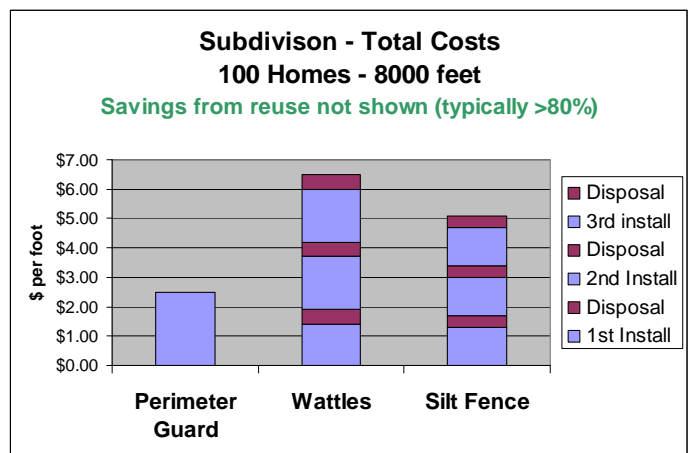
A new way of doing things

- Initial installation was done by a low-skilled day crew without trucks or other equipment. A crew of 10 were trained first thing in the morning, and installed 8000 feet by the end of the day.
- Maintenance requirements were low enough on this 100 home subdivision, that maintenance was done by Morrison labor and supervision.
- As houses were finished, at final grade Perimeter Guard segments were pulled-up at no-cost by the landscaper and stockpiled for later use elsewhere.
- Sediment Control performance was excellent—allowing Morrison to cut back on weekly sweeping requirements.

Proven Benefits

Time and time again, ERTEC has delivered the following benefits to homebuilders:

- Significantly lower total cost,
- Significantly better sediment control



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Home Construction