

The Rain Events

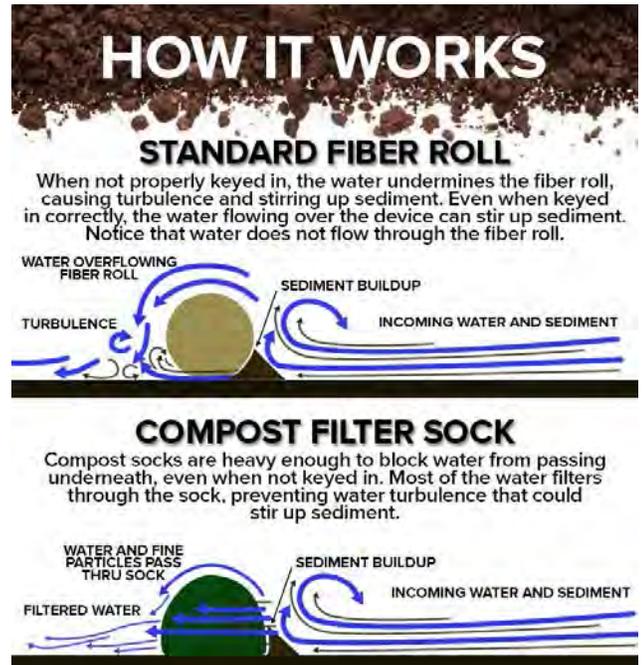
A Monthly Newsletter on the California Industrial General Permit
By WGR Southwest, Inc.

STRAW - IS IT THE BEST DEAL?

The rainy season has officially started for California, and many industrial permittees are scrambling to protect their drain inlets and remove as much sediment as possible. For many facilities, the go-to sediment control device seems to be fiber roll – a cheap and easy BMP to install, and very effective in certain applications. However, is fiber roll a viable filtration media for protecting drain inlets? Surprisingly, the answer may be no. Though fiber roll can be very effective under the right circumstances, it is not an effective filtration device, and many times does not even satisfactorily control sedimentation. As it turns out, using compost filter socks is a much better solution for drain inlet protection.

In a recent series of tests performed by *The Rain Events* staff, we made some surprising discoveries about fiber roll and compost filter socks, and their ability to adequately filter storm water runoff. During some heavy rain events, we headed out to a nearby dirt lot with a couple lengths of fiber roll and two 8”-diameter compost socks. In an attempt to replicate an average installation, we staked the fiber roll in an overlapping circle around our test drain inlet, but did not fully trench it into the ground. After waiting 30 minutes for sediment to settle, we carefully sampled the water inside and outside the fiber roll. When the samples were analyzed using a calibrated turbidity meter, we were surprised to find that the sample collected downstream of the fiber roll was more turbid than the water on the other side of the roll! (See the sidebar for the numerical results). While we didn’t perform any scientific tests to see why this was happening, we did talk with a few experienced industry professionals, and came up with a reasonable explanation, as shown in the illustration on the right.

We performed a similar test on a drain inlet in a paved parking lot, where a noticeable petroleum sheen was flowing towards the drain. Of course, the fiber roll could not be staked into the asphalt, so we placed it around the drain in an overlapping circle. When we returned 30 minutes later, the sheen inside the roll had decreased, but was still slightly visible. The turbidity results were negligible, since the water flowing off the asphalt was not turbid. We then removed the fiber roll from **both drains** and replaced them with the compost socks. After waiting another 30 minutes, we returned to the drains to run our tests. The difference was night and day – the turbid water from the dirt lot was filtered clean, and the petroleum sheen on the asphalt lot was completely removed.



COST COMPARISON
Over a three year period, how much might you spend per foot on inlet protection and filtration devices? We based these prices on the typical costs and expected lifespan of each device.

FIBER ROLL
REPLACED FOUR TIMES OVER THE COURSE OF THREE YEARS
\$0.68/LINEAR FT. x 4 INSTALLATIONS.
\$2.72/FT

COMPOST SOCK
INSTALLED ONCE AT THE BEGINNING OF THE THREE-YEAR PERIOD
\$2.71/LINEAR FT. x 1 INSTALLATION.
\$2.71/FT

The explanation for this difference in performance is really quite simple. Straw repels water, which is one reason why many people in underdeveloped countries still use straw as roofing material. The purpose of straw wattle is not to filter water, but to stop the water until it builds up and flows over the top of the roll. This allows sediment enough time to settle on the “upstream” side of the roll, and the resulting water is less turbid. However, even when installed correctly, the wattle system sometimes allows water to pass under or over the roll, which has the unintentional result of creating turbid water *after* the device. *Continued on the next page.*

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SHOWROOM!

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Lodi CA 95220

PRODUCT SPOTLIGHT

Filtrex® SiltSoxx™ is a compost-based sediment control device designed to help stop silt and sediment from leaving your jobsite.

SiltSoxx™ stops pollutants in two ways - by allowing water to temporarily pond outside the sock, and by cleansing water as it passes through the sock. Sediment is either filtered or settled out. Unlike fence or other sediment control devices, the unique construction of Filtrex® mesh allows water to pass through the sock while keeping silt and clay inside the device.

Product Specifications:

- Meets all EPA, AASHTO, USACE and USDA-NCRS standards
- 8" Diameter in stock; call for additional sizes
- Available in a 160-foot continuous length, or pre-cut 10-foot segments (120ft/pallet)

STARTING AT
\$2.71
per foot



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BMP

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BMP Outlet is a supply house for affordable erosion control products, drain inlet protection, sorbents, spill containment, and field instruments.

We have a large inventory of many different types of product, and can order whatever you need for your project.

SiltSifter® Tube

The patented SiltSifter® Tube is a dual-component sediment control device that is designed for filtration and high-flow, and is flexible enough to be used in many different applications requiring customized protection, such as around grated drain inlets. SiltSifter® Tubes are filled with 1-inch rock and Pine Wood Excelsior, a specialized wood chip filter for capturing silt, sediment, and soils.

Product Specifications:

Material: High-density polyethylene with Poly Thread (4) Lock stitching

Filtering Media: Pine Wood Excelsior and 1" rock

Diameter: 9"

Length: 60"

Weight (dry): Approx. 30 lbs.

Only \$38.50
(each)



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Need a HERO?



<http://www.youtube.com/watch?v=dcGrSqtEvIE&list=PL859F27E27F10F884&feature=c4-overview-vl>



- ✓ Protect hillsides in an instant.
- ✓ Easy-to-store duffel bag can be stored in field trucks.
- ✓ One person can install the device.
- ✓ One use will pay for the product by preventing damage and costly repairs.



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THE SLOPE HERO

Slope
HILLSIDE EMERGENCY RUNOFF OUTLET

HILLSIDE
EMERGENCY
RUNOFF
OUTLET

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Since we're
done sampling...

LET IT RAIN!

LET IT RAIN!

LET IT RAIN!

Merry Christmas

from the editors of **The Rain Events**

remember the Reason for this season ✨ Luke 2:11

Storm Water Contest ...

Each month, we invite our readers to participate in a contest to test their knowledge of the Industrial General Permit and their storm water compliance program. We enter all submittals to our monthly newsletter question into a drawing, and one person is selected at random to receive a \$25 gift card.

Last Month, the question was ...

How often do you need to recertify for NEC coverage?

Toni Scott submitted the winning answer! The correct answer is that NEC coverage under the new permit requires an **annual recertification**.

Toni wins a \$25 gift card to Applebee's to enjoy some delicious BBQ ribs!

This Month's Contest Question ...

What is the correct way to install fiber roll?

By December 31, 2014, submit your response to the above question by sending an email to steravskis@wgr-sw.com. All persons submitting the correct answer will be placed in a drawing. The winner will receive a \$25 gift card to P.F. Chang's China Bistro.



**FROM THE MAKERS OF
STORM WATER
AWARENESS
WEEK 2014**

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