SMCWPP Construction Site Inspection Workshop March 30, 2022

Compost Socks vs. Fiber Rolls The SMACKDOWN!

(Inlet Protection BMPs)





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Presentation Overview

- SB 1383 reminder
- Fiber roll uses
- Compost sock uses
- Inlet Protection Best Management Practices
- The Smackdown! (video with comparison of compost socks and fiber rolls)





Reminder: SB 1383 - Procurement Requirement

- Beginning January 1, 2022, SB 1383 requires cities/counties to procure annually a quantity of recovered organic waste products.
- CalRecycle has an annual procurement target for each jurisdiction based on population. Jurisdictions can fulfill their target by procuring any combination of the following recovered organic waste products:
 - Mulch (.08 tons/capita) (This is for uncomposted wood mulch.)
 - Compost (.08 tons/capita x 0.58 conversion factor composted wood mulch counts)
 - Renewable Energy (Transportation Fuel, Heat, and Electricity) from Anaerobic Digestion and Electricity from Biomass Conversion (Various calculations)





Ways to Procure Compost and Mulch in Construction Projects

Municipal Capital Improvement Program Projects:

- Direct purchase of erosion and sediment control compost BMPs
- Require contractor to use erosion and sediment control compost BMPs
- Final vegetation/Bioretention areas use compost and mulch
- Composted wood mulch counts as compost if it has been composted at a permitted facility (so not your own wood chips and not wood chips from a chip/grind-only operation)





Fiber Rolls (aka Straw Wattles)





Fiber Roll Uses

- Perimeter control
- On Slopes
- Impervious surfaces do they work?
 - Stake in
 - Trench in or use grade differential (e.g., at curb)
 - Overlap ends (next to each other not on top)
 - Replace damaged rolls
 - Weigh down with gravel bags





Good Uses for Fiber Rolls

Perimeter Control:

- Stake in
- Use grade differential next to curb.
- Do not place on sidewalk.





Good Uses for Fiber Rolls

On Slopes:

- Contact with ground
 - Staked in
 - Trenched on slope
- Overlap rolls at ends
- Along contours of hillside
- Spacing depends on slope



Not trenched in: Caltrans has a detail option where the rolls are only roped down as shown in this photo.

CASQA's detail recommends <u>trenching</u> and <u>staking</u> as shown here - with no other option.







Poor Installations or Uses of Fiber Rolls













Compost Socks





Compost Sock Uses

- Perimeter control
- On Slopes
- Impervious surfaces
 - Stake in (on pervious surfaces)
 - Do not need to trench in, but can use grade differential
 - Overlap ends (next to each other not on top)
 - Replace damaged rolls
 - Do not need to wWeigh down with gravel bags





Around inlet on impervious surface:

- Overlapped at ends
- Doesn't need to be weighted down







Along perimeter:

- Overlapped at ends
- With grade separation
- Doesn't need staking
- Not on sidewalk







Contamination can be an issue in the contents of the sock, so check for that if the sock is opened and emptied on-site at the end of construction.







Inlet Protection BMPs





General Guidance for Inlet Protection

- Inlet protection <u>should not</u>:
 - increase flooding (where does overflow go?)
 - <u>cause</u> sediment discharge (i.e. broken sand bags/gravel bags)
- Inlet protection <u>should be</u>:
 - maintained regularly
 - removed at end of job
 - reducing discharges of sediment and other pollutants
- Inlet protection may be off site





Sediment Control BMPs: Inlet Protection

- Gravel bags
 - Located around inlet based on direction of flow











These inlet protection BMPs are better for roadway inlets and catch basins since they can be driven over without much damage.







Poor Inlet Protection

















Check Dam BMPs





Sediment Control BMPs: Check Dams

- Correctly installed check dams should:
 - Slow the flow
 - Filter sediment out of flow and/or trap flow to allow sediment to settle out
 - Use gravel bags, fiber rolls, foam rolls or compost socks
 - Be designed for the location and the expected flow











Check Dam Problems







A comparison of the effectiveness of Fiber Rolls vs. Compost Socks for inlet protection

aka FIBER ROLL SMACK DOWN VIDEO (my title)

Courtesy of John M. Teravskis and "The Monthly Dirt" Newsletter

https://www.youtube.com/watch?v=PQ_krMLJ4C4





Another video showing the inadequacy of Fiber Rolls used for inlet protection

https://www.youtube.com/watch?v=7aSq1pSGNVk





CASQA BMP Fact Sheets

Compost Socks and Berms



Description and Purpose

Compost socks and berms act as three-dimensional biodegradable filtering structures to intercept runoff where sheet flow occurs and are generally placed at the site perimeter or at intervals on sloped areas. Compost socks are generally a mesh sock containing compost and a compost berm is a dike of compost, trapezoidal in cross section. When employed to intercept sheet flow, both BMPs are placed perpendicular to the flow of runoff, allowing filtered runoff to pass through the compost and retaining sediment (and potentially other pollutanta). A compost acck can be assembled on site by filling a mesh sock (e.g. with a pneumatic blower). The compost berm should be constructed using a backhoe or equivalent and/or a pneumatic delivery (blower) system and should be properly compacted. Compost socks and berms act as filters, reduce runoff velocities, and in some cases, aid in establishing vegetation.

Compost is organic, biodegradable, and renewable. Compost provides soil structure that allows water to infiltrate the compost medium which helps prevent rill erosion and the retained moisture promotes seed germination and vegetation growth, in addition to providing organic matter and nutrients important for fostering vegetation. Compost improves soil quality and productivity, as well as crosion and sediment control.

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Categories	

SE-13

EC	Ercsion Contro	х
SE	Sediment Control	\checkmark
TC	Tracking Control	
WE	Wind Ercsion Control	
NS	Non-Storntwater	
	Management Control	

Waste Management and

WM Materials Follution Control

Legend:

Primary Category

Secondary Category

Targeted Constituents

Sediment	\sim
Nutrients	
Fresh	
Metals	×
Baclaria	×
Oil and Greese	×
Organics	

Potential Alternatives

SE-1 Silt Fance SE-5 Fiber Roll SE-6 Gravel Bag Berm SE-8 Sandbag Sanier SE-14 Bio1Iter Bags

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CASQA BMP Handbook Construction www.casqa.org

Questions?







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