6.2.1 Compost Storm Water Blanket (CSWB™)  

PURPOSE & DESCRIPTION  
Filtrexx® Compost Storm Water Blanket (CSWB™) is a storm water runoff reduction and permanent vegetation establishment practice used on post-construction soil surfaces. CSWB are intended for application and use where:

- land disturbing activities have ceased,
- permanent vegetation is required,
- reduction of pollutant loading in storm runoff is required,
- runoff volume reduction from contributing watershed is necessary,
- reduction in the size of storm water collection or bio-retention ponds, and rain gardens is necessary.

CSWB are designed to act like a sponge for rain water and non-concentrated storm runoff. By holding large volumes of water at and across the land surface, CSWB increase the infiltration and evapotranspiration of water from rainfall and storm runoff. These processes aid the cycling of water by recharging ground water and atmospheric water vapor. By increasing the land surface roughness, CSWB slow the rate of sheet runoff, allowing it to more readily infiltrate the soil surface. CSWB are also specifically designed to allow for permanent and sustained vegetation growth.

APPLICATION  
CSWB are surface applied at a depth of 2 in (50mm). CSWB are used where reduction of storm water runoff and/or permanent vegetation is required or will improve the design and function of the landscape. CSWB are generally applied after land disturbing activities have ceased and where sheet runoff may exist under storm conditions. CSWB should NOT be used in areas of concentrated storm water flow. CSWB should not be used on slopes greater than 2:1 without the use of additional stabilizers or support practices (See Section 1.8 of Filtrexx Design Manual). Filtrexx Slope Interruption (See Section 1.5 of Filtrexx Design Manual) may be seeded and used with CSWB to slow runoff velocity and the potential for soil erosion.

Runoff Volume Reduction  
CSWB are designed to absorb water. For every 1% of organic matter, the CSWB will hold approximately 5,500 gal (21 cubic m) of water per acre inch (103 cubic m). CSWB are typically 25% organic matter by wet weight and 50% organic matter by dry weight. Alternatively, CSWB typically hold approximately 1.6 oz (45 g) of water per 3.6 oz (100 g) of CSWB (dry weight); 1 gal (0.004 cubic m) of water per 20 lbs (9 kg) of CSWB (dry wt) or per 30 lbs (14 kg) of CSWB (wet wt). This equates to approximately 40 gal (0.15 cubic m) of water per cubic yard (0.76 cubic m) of CSWB and 5,400 gal (722 cubic ft, 20 cubic m) of water per acre inch (0.01 ha meter, 103 cubic m) of CSWB, and 10,800 gal (1444 cubic ft, 41 cubic m) of water for a 2 in (50mm) CSWB; An acre inch (0.01 ha meter) of CSWB requires approximately 135 cubic yards (103 cubic meters) of material.

Organic vs. Fertilizer Nutrients  
Although most specification and design manuals include fertilizer recommendations or requirements for permanent vegetation establishment, mineral nutrients from fertilizers may not be preferable where vegetation sustainability and water quality are a concern. CSWB provide organic nutrients, which: are slow release, provide plant micronutrients, and are less likely to be transported in storm runoff to receiving waters – which can reduce pollution and eutrophication of waterways.

INSTALLATION  
1. CSWB used for storm runoff reduction and permanent vegetation establishment shall meet Filtrexx Compost Storm Water Blanket and Filtrexx Certified GrowingMedia Specifications.
2. Call Filtrexx at 877-542-7699 or visit www.filtrexx.com for a current list of installers and distributors of Filtrexx products.
3. CSWB will be placed at locations indicated on plans as directed by the Engineer.
4. Land or soil surface shall be roughened prior to application of CSWB.
5. CSWB shall be applied to 100% of the land surface area where storm water reduction and permanent vegetation is required. No native soil shall be visible in or through the CSWB.
6. CSWB shall be applied at a minimum depth of 2 in (50mm) or at a rate of 270 cubic yards/ac (513 cubic m/ha).
7. Seed shall be thoroughly mixed with the GrowingMedia prior to application or surface applied to GrowingMedia at time of application.
8. CSWB shall not be installed in areas of concentrated storm runoff flow, including channels and ditches.
9. CSWB shall be installed at least 10 ft (3m) over and beyond the shoulder of a slope and/or into existing vegetation to ensure runoff does not undercut the blanket.
10. CSWB installed on slopes: greater than or equal to 4:1 shall be tracked; greater than 2:1 shall be tracked and use other support practices (See Section 1.8 of Filtrexx Design Manual).

INSPECTION & MAINTENANCE  
Routine inspection should be conducted within 24 hrs of a runoff event or as designated by the regulating authority. If rilling occurs or vegetation does not establish, the area of application should be reapplied with a CSWB. If failure continues, the use of runoff diversion devices, slope interruption devices, erosion control support practices, soil stabilizers, turf reinforcement mats, or hard armoring practices should be considered. CSWB should be inspected until permanent vegetation is established. Permanent vegetation practices should always be inspected for noxious or invasive weeds.

1. The Contractor shall maintain the stormwater blanket in a functional condition and it shall be routinely inspected until vegetation is established.
2. CSWB shall be maintained until a minimum of 70% uniform cover of the applied area has been vegetated or as required by the jurisdictional agency.
3. CSWB may require regular irrigation during hot and dry weather, or arid and semi-arid climates to ensure permanent vegetation establishment.
4. Where a CSWB fails, rilling occurs, or vegetation does not establish the Contractor will repair or provide an approved and functioning alternative.
5. If gullies form in CSWB, the area shall be re-graded prior to reinstallation of CSWB or approved alternative.
6. If a CSWB is damaged by stormwater runoff, installation of slope interruption devices across the slope, or runoff diversion devices above the CSWB may be required.
7. No additional fertilizer or lime is required for vegetation establishment and maintenance.
ADDITIONAL INFORMATION
For other references on this topic, including additional research reports and trade magazine and press coverage, visit the Filtrexx website at filtrexx.com

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Call for complete list of international installers and distributors.

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Figure 2.1. Engineer Design Details for Compost Storm Water Blanket.

FILTREXX® COMPOST STORM WATER BLANKET

**Notes:**

1. Compost Storm Water Blankets to meet Filtrexx® installation specifications.
2. Compost Storm Water Blankets must use Filtrexx® Certified GrowingMedia™.
3. Compost Storm Water Blankets shall be applied to 100% of bare soil or area specified where stormwater reduction and permanent vegetation is required.
4. Compost Storm Water Blankets shall be installed at least 10 feet over the slope shoulder or into existing vegetation.
5. Compost Storm Water Blankets will be placed at locations indicated on plans as directed by the Engineer.
6. Land or soil surface shall be roughened prior to application of Compost Storm Water Blanket.
7. Compost Storm Water Blankets shall be applied at a minimum depth of 2 in. or at a rate of 270 cubic yards/ac.
8. Seeds shall be thoroughly mixed with the Filtrexx® GrowingMedia™ prior to application or surface applied to Filtrexx® GrowingMedia™ at the time of application.
9. Compost Storm Water Blankets shall not be installed in areas of concentrated storm runoff flow, including channels and ditches.
10. Compost Storm Water Blankets installed on slopes greater than 4:1 shall be tracked; installation on slopes greater than 2:1 shall be tracked and use other support practices, such as Filtrexx® Lockdown™ Netting.
Figure 2.2. Unit Hydrograph of a Compost Storm Water Blanket Relative to a Bare Study Clay Loam for a 4 in/hr 1 hr Storm Event.