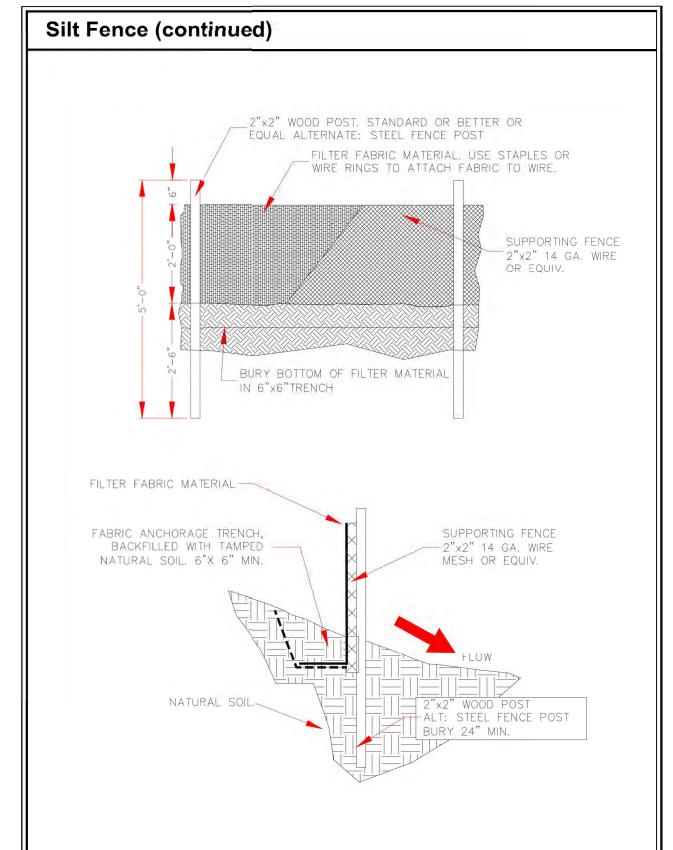
National Pollutant Discharge Elimination System Manual

National Pollutant Discharge Elimination System Manual Revision 0 Appendix A2 – Structural Controls November 2002



filtrexx® LAND IMPROVEMENT SYSTEMS Section 1: Erosion & Sediment Control – Construction Activities

SWPPP Cut Sheet: Filtrexx® Sediment Control

Sediment & Perimeter Control Technology

PURPOSE & DESCRIPTION

Filtrexx® Sediment control is a three-dimensional tubular sediment control and storm water runoff filtration device typically used for perimeter control of sediment and other soluble pollutants (such as phosphorus and petroleum hydrocarbons), on and around construction activities.

Filtrexx® Sediment control is to be installed down slope of any disturbed area requiring erosion and sediment control and filtration of soluble pollutants from runoff. Sediment control is effective when installed perpendicular to sheet or low concentrated flow. Acceptable applications include:

- Site perimeters Above and below disturbed areas subject to sheet runoff, interrill and rill erosion
- Above and below exposed and erodable slopes Around area drains or inlets located in a 'sump' On compacted soils where trenching of silt fence is difficult or impossible
- Around sensitive trees where trenching of silt fence is not beneficial for tree survival or may unnecessarily disturb established vegetation. On frozen ground where trenching of silt fence is
- On paved surfaces where trenching of silt fence is impossible.

INSTALLATION

let nature do it."

 Sediment control used for perimeter control of sediment and soluble pollutants in storm runoff shall meet Filtrexx® Soxx™ Material Specifications and use Certified Filtrexx[®] FilterMediaTM.

 Contractor is required to be Filtrexx[®] Certified™ as determined by Filtrexx® International, LLC

(440-926-2607 or visit website at www.filtrexx. com). Certification shall be considered current if appropriate identification is shown during time of bid or at time of application (current listing can be found at www.filtrexx.com). Look for the Filtrexx® Certified™ Seal.

- 3. Sediment control will be placed at locations
- indicated on plans as directed by the Engineer. 4. Sediment control should be installed parallel to the base of the slope or other disturbed area. In extreme conditions (i.e., 2:1 slopes), a second Sediment control shall be constructed at the top of the slope.
- 5. Effective Soxx[™] height in the field should be as follows: 8" Diameter Sediment control = 6.5" high, 12" Diameter Sediment control = 9.5" high, 18" Diameter SiltSoxx™ = 14.5" high, 24" Diameter Sediment control = 19" high. 6. Stakes shall be installed through the middle of
- the Sediment control on 10 ft (3m) centers, using 2 in (50mm) by 2 in (50mm) by 3 ft (1m) hard wood stakes. In the event staking is not possible, i.e., when Sediment control is used on pavement, heavy concrete blocks shall be used behind the Sediment control to help stabilize during rainfall/runoff events.
- 7. Staking depth for sand and silt loam soils shall be 12 in (300mm), and 8 in (200mm) for clay soils. 8. Loose compost may be backfilled along the

upslope side of the Sediment control, filling the

seam between the soil surface and the device, improving filtration and sediment retention. **9.** If the Sediment control is to be left as a permanent filter or part of the natural landscape, it may be seeded at time of installation for establishment of permanent vegetation. The

Engineer will specify seed requirements.

A2-42

Construction Activities | Section 1: Erosion & Sediment Control | 323

10. Filtrexx[®] Sediment control is not to be used in perennial, ephemeral, or intermittent streams.

See design drawing schematic for correct Filtrexx®

Sediment control installation (Figure 1.1).

INSPECTION AND MAINTENANCE

Routine inspection should be conducted within 24 hrs of a runoff event or as designated by the regulating authority. Sediment control should be regularly inspected to make sure they maintain their shape and are producing adequate hydraulic flowthrough. If ponding becomes excessive, additional Sediment control may be required to reduce effective slope length or sediment removal may be necessary. Sediment control shall be inspected until area above has been permanently stabilized and construction activity has ceased

- 1. The Contractor shall maintain the Sediment control in a functional condition at all times and it shall be routinely inspected.
- 2. If the Sediment control has been damaged, it shall be repaired, or replaced if beyond repair.
- base of the upslope side of the Sediment control when accumulation has reached 1/2 of the effective height of the Sediment control, or as directed by the Engineer. Alternatively, a new Sediment control can be placed on top of and slightly behind the original one creating more sediment storage capacity without soil
- 4. Sediment control shall be maintained until disturbed area above the device has been

3. The Contractor shall remove sediment at the

- permanently stabilized and construction activity has ceased. 5. The FilterMedia™ will be dispersed on site once disturbed area has been permanently stabilized, construction activity has ceased, or as determined
- by the Engineer. **6.** For long-term sediment and pollution control applications, Sediment control can be seeded at the time of installation to create a vegetative filtering system for prolonged and increased filtration of sediment and soluble pollutants (contained vegetative filter strip). The appropriate

seed mix shall be determined by the Engineer.

Slope Percent	Maximum Slope Length Above Sediment Control in Feet (meters)*				
	8 in (200 mm) Sediment control 6.5 in (160 mm)**	12 in (300 mm) Sediment control 9.5 in (240 mm) **	18 in (450 mm) Sediment control 14.5 in (360 mm) **	24 in (600mm) Sediment control 19 in (480 mm) **	32 in (800mm) Sediment control 26 in (650 mm) **
5	400 (120)	500 (150)	550 (165)	650 (200)	750 (225)
10	200 (60)	250 (75)	300 (90)	400 (120)	500 (150)
15	140 (40)	170 (50)	200 (60)	325 (100)	450 (140)
20	100 (30)	125 (38)	140 (42)	260 (80)	400 (120)
25	80 (24)	100 (30)	110 (33)	200 (60)	275 (85)
30	60 (18)	75 (23)	90 (27)	130 (40)	200 (60)
35	60 (18)	75 (23)	80 (24)	115 (35)	150 (45)
40	60 (18)	75 (23)	80 (24)	100 (30)	125 (38)
45	40 (12)	50 (15)	60 (18)	80 (24)	100 (30)
50	40 (12)	50 (15)	55 (17)	65 (20)	75 (23)

* Based on a failure point of 36 in (0.9 m) super silt fence (wire reinforced) at 1000 ft (303 m) of slope, watershed width equivalent to receiving length of sediment control device, 1 in/ 24 hr (25 mm/24 hr) rain event.

** Effective height of Sediment control after installation and with constant head from runoff as determined by Ohio State University.

324 | Filtrexx Low Impact Design Manual | Version 8.0

A2-43

SWPPP Cut Sheet -1.1. Filtrexx® Sediment Control - 2" X 2" X 36" WOODEN STAKES PLACED 10' O.C. — FILTREXX® SOXX™ (12" TYPICAL) BLOWN/PLACED FILTER MEDIA ™ — AREA TO BE PROTECTED **WORK AREA** 12" MIN SECTION NTS — 2" X 2" X 36" WOODEN STAKES PLACED 10' O.C. AREA TO BE PROTECTED — FILTREXX® SOXX™ (12" TYPICAL) WATER FLOW **WORK AREA** I. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS. 2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS. 3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS PLAN NTS DETERMINED BY ENGINEER.

Construction Activities | Section 1: Erosion & Sediment Control | 325 let nature do it." A2-44

FILTREXX® SEDIMENT CONTROL

National Pollutant Discharge Elimination System Manual Appendix A5 – Good Housekeeping/Materials Management

Concrete Waste Management

Store dry and wet materials under cover, away from

Avoid mixing excess amounts of fresh concrete or cement

Do not wash out concrete trucks into storm drains, open

DESCRIPTION

APPLICATIONS

drainage areas.

areas only.

employees and subcontractors.

pollution from concrete wastes:

ditches, streets, or streams.

designated areas.

For onsite washout:

a bermed or level area.

waste management.

LIMITATIONS

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August 2012

Concrete waste management prevents or reduces the discharge of pollutants to storm water by conducting washout offsite, performing onsite washout in a designated area, and training The following low-cost measures will help reduce storm water

concrete can set, be broken up, and then disposed of When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water to

 Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stock pile, or dispose in the trash. Train employees and subcontractors in proper concrete

area by constructing a temporary pit or bermed area

Wash out wastes into the temporary pit where the

large enough for liquid and solid waste.

Offsite washout of concrete wastes may not always be possible. MAINTENANCE REQUIREMENTS

properly managed.

Inspect subcontractors to ensure that concrete wastes are being

If using a temporary pit, dispose of hardened concrete on a regular basis.

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Revision 2

Applications Perimeter Control Slope Protection Sediment Trapping **Channel Protection** Temporary Stabilization Permanent Stabilization ✓ Waste Management ✓ Housekeeping Practices **Targeted Constituents** Perform washout of concrete trucks offsite or in designated Sediment Nutrients Toxic Materials Oil and Grease Do not allow excess concrete to be dumped onsite except in Floatable Materials ✓ Construction Wastes <sup>
±</sup> Locate washout area at least 50 feet from storm drains, Impact Significant ✓ Medium Unknown or Questionable

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REVISIONS

DRAWN BY SLK **REVIEWED BY MDT** DATE **9/22/16**

DRAWING NAME **EROSION AND** SEDIMENT CONTROL

DETAILS AND NOTES

SHEET NO. **ESC 103**

open ditches, or water bodies. Prevent runoff from this