

# COMPOSITE FILTER SOCK - PLAN SHEET DETAILS

## GENERAL

- Compost Filter Sock (CFS) can be delivered to the jobsite "pre-filled" and coiled onto 40x48 wood pallets. CFS can also be filled on-site. It can be installed with a skid steer, backhoe, or other machinery. The contractor should determine which method is best, based on site conditions.
- Proper jobsite **diameter sizing** for CFS should be done by a Certified Professional Engineer according to the Maximum Slope Length chart and/or applicable Local or State E&S manual. CFS diameters are 8-inch, 12-inch, 18-inch, 24-inch, and 32-inch. Commonly used **pyramids** include: three 12s, two 18s, with one 12, and three 18s (equates to single 32-inch diameter). When pyramiding with different diameters, always place the smaller CFS on top.
- CFS **Effective Heights** in the field are as follows: 8-inch (effective height 6.5 inches), 12-inch (9.5 inches), 18-inch (14.5 inches), 24-inch (19.5 inches), and 32-inch (25-inches). When determining settled Sediment Storage Capacity, the effective height should be used - not the CFS diameter.
- Filler Material** (HQ or EV) should be specified by a Certified Professional Engineer. Contractor - select the appropriate Filler Material when ordering. HQ Filler Material is 100% all natural blend of **well-aged shredded, chipped, and ground hardwood** (PA DEP 2012 E&S Manual Specs for High Quality watershed ABACT Applications). EV filler is 50% HQ Filler Material plus 50% Certified Compost (PA DEP 2012 E&S Manual Specs for Exception Value Watershed ABACT Applications). For sediment removal or installation in a **High Quality** watershed, choose HQ Filler Material. For additional pollutant removal (Heavy metals, nitrates, phosphates, ect.), diversion berms, or installation on an **Exception Value** watershed, choose EV Filler Material. EV Filler Material pallets are typically 15% heavier than HQ CFS Filler Material pallets. If not specified at time of order, **default Filler Material is HQ. Contractor** - Allow two extra days lead-time when ordering EV Filler Material. Certificates for Compost used in EV Filler Material are available upon request.
- Under normal conditions, **stake CFS at 10-inch intervals** and at CFS Joints (continuous palletized CFS includes stakes in kit - under coiled CFS). For 8-inch and 12-inch diameter, use a 28-inch stake  $\geq 1\frac{3}{4}$  by  $1\frac{3}{4}$ -inch. For 18-inch and 24-inch, use a 42-inch stake  $\geq 1\frac{7}{8}$  by  $1\frac{7}{8}$ -inch. For 32-in CFS use a 48-inch stake  $\geq 1\frac{7}{8}$  by  $1\frac{7}{8}$ -inch. When staking pyramids, for three 12s, use 42-inch stake; for two 18s plus one 12, and three 18s, use 48-inch stake.

## INSTALLATION

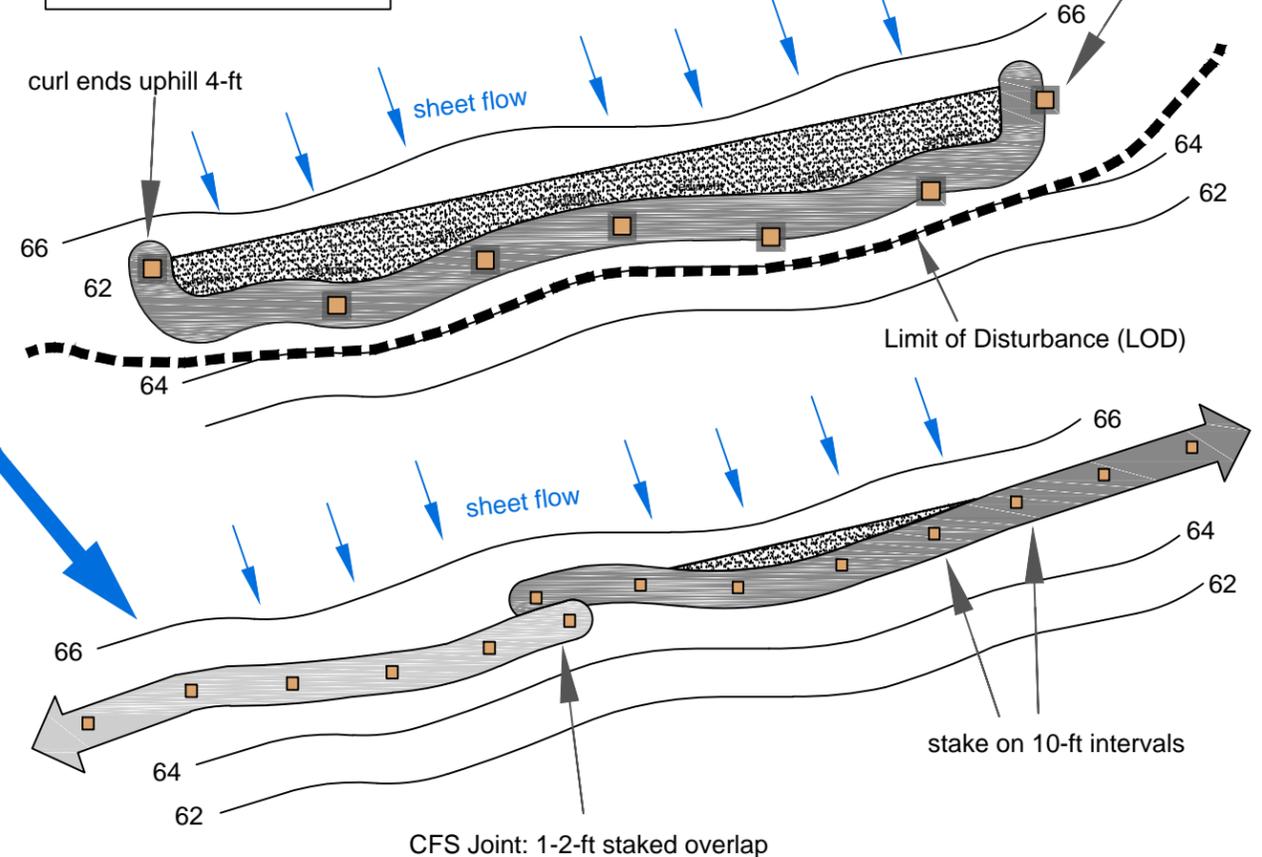
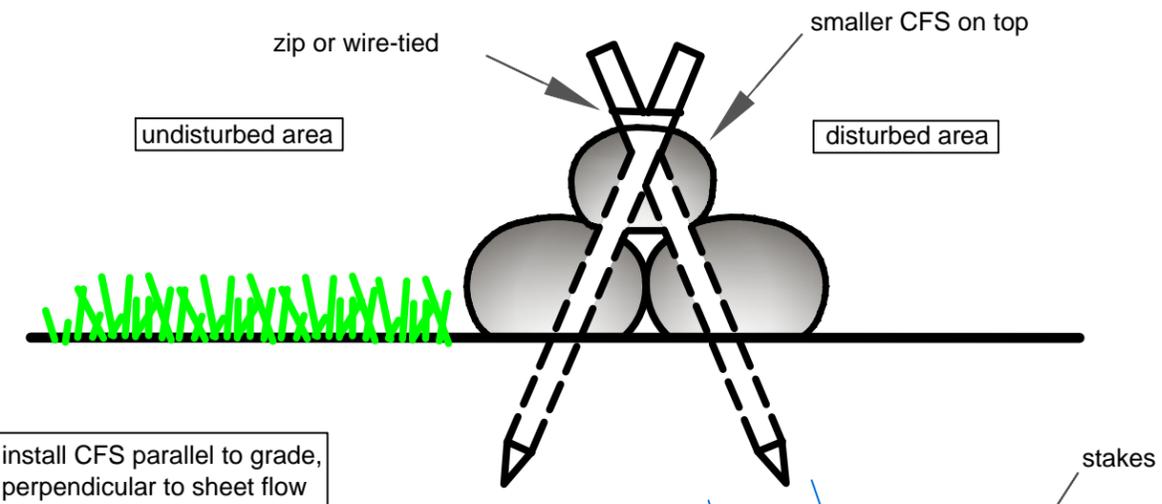
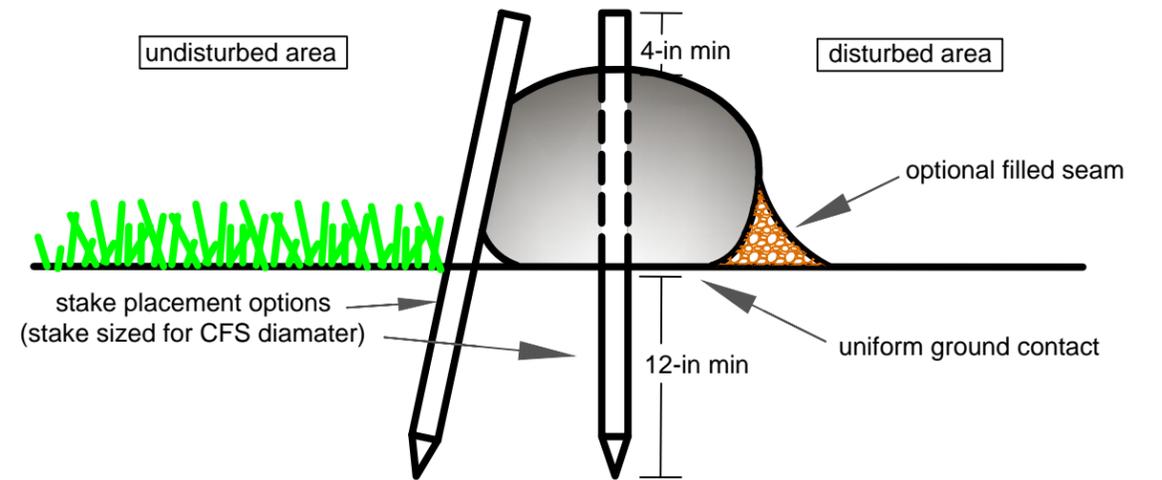
- CFS should be laid on a flat level area, in sections running perpendicular to the runoff flow direction from the Area of Disturbance. Loose material (soil, mulch, sand, or fill) may **optionally** be placed along the up slope side, filling the seam between the soil surface and the sock, improving sediment retention.
- Hardwood stakes shall be installed through the middle of *continuous* CFS on 10-ft intervals. CFS may also be staked on the down slope side with stakes tilted downward wedging the CFS in place. Staking depth for sand clay, and silt loam soils shall be 12-inches. In the event staking is not possible (when CFS is used on concrete or paved hard surface) heavy concrete blocks shall be behind CFS to help stabilize during rainfall/runoff events. Where two sections meet, j-hook higher elevation end, or side overlap ends 1-2-ft and tightly side-butt. Stake through each end and add loose material as needed.
- Palletized pre-cut CFS can be used in areas where machine access is difficult, CFS needs to be occasionally moved, or CFS needs to run diagonal to grade. CFS sectional installation allows periodic "j-hooks" at section ends. This prevents parallel unchecked water flow that can undermine the CFS.
- CFS Joint:** Where two CFS sections meet on **level** grade, overlap the adjoining ends, tightly butt together, and stake through each end (see detail). Where Two sections meet on **un-level** grade, j-hook higher elevation end, stake, and begin new section just below. Use loose mulch to fill any voids in joint.

## MAINTENANCE

- CFS should be inspected after each runoff event. Sediment to be removed once it has accumulated to one-half the original height of the CFS. Repair with handwork if given section of CFS shows signs of undercutting. Reinforce with handwork if a given section of CFS shows signs of pushing.
- A given section of CFS shall be replaced whenever it has deteriorated to such an extent that the effectiveness is reduced or diminished. Deterioration could occur because of natural mesh fabric breakdown over time or abusive field activities such as dragging/moving on the job-site or driving over CFS.
- Some ripping and tearing of the CFS fabric is acceptable as long as the overall structural integrity of the CFS is not compromised. The fabric must continue to hold the Filler Material securely in place in an oval form.
- A given section of CFS shall be replaced whenever sediment has built up and been removed three times. this section of CFS is likely full of fine powdery sediment - this is normal.

## REMOVAL

- CFS shall remain in place until disturbed areas have been stabilized. All sediment accumulation at CFS shall be removed and properly disposed of before de-installing CFS. When de-installing, cut CFS open and spread the Filler Material around the site. The netting shall be removed from job-site.



 <p>MKB Company - 3450 E College Ave, State College, PA 16801 888-578-0777 www.DiamondSock.com</p>	<p>The selection and use of this detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.</p>	<p>Available From:</p>
		 <p>www.interface2o.com 616-931-5584</p>