



Compost Filter Sock

8" diameter x 10' long - services 1 storm drain that is part of a sidewalk, or in the road



| OBJECTIVE | CATEGORY | DIFFICULTY | Number of People | TIME |
|---|---------------------------|--|------------------|---------|
| To create a compost filter "sock" for soil erosion control and stormwater pollutant filtration - 8" diameter sock | Wastewater and Composting | Medium <i>*Recommended for high school and up</i> | 2-4 people | 1.5 hrs |

| MATERIAL LIST | TOOLS & EQUIPMENT |
|---|--|
| <p><u>SOCK</u> (1) 8" diameter x 10' long synthetic filter sock in order to make two socks of 6' and 4' in length</p> <p>SOCK FILLER COMPOST: 25 gallons mature unscreened compost</p> <p>COMPOST PARTICLE SIZE RATIO FOR SOCK 10% particle size of a 1/2" or less (fine compost) 90% particle size between 1/2" - 2" (compost "overs")</p> | <p>(1) shovel (2) hand trowels (1) 1/2" gauge hardware fabric compost sifter (3) wheelbarrows OR (3 or 4) - 27 gallon bins (4) 12" long zip ties (1) scissors (1) Mallet (4) 4" or 6" Landscape pins if you are putting (2) socks together</p> |

| HOW TO: |
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| <p>Preparing Compost Recipe</p> <ol style="list-style-type: none"> Place the sifter over the wheelbarrow or 27-gallon bin to sift compost. Place a second bin nearby for compost material that is too large to go through the sifter (bigger than 1/2" particle size). We call these large pieces "overs". Shovel compost on the sifter, a few scoops at a time. Sift using a hand trowel. Empty the overs that do not pass through the screen into a 27 gal bin, from time to time. Take an empty bin and blend 90% of your "overs" with 10 % of fine compost using a shovel. You need 20 gallons of material for a 10' sock. <p>Filling and placing the Compost Sock</p> <ol style="list-style-type: none"> Measure the perimeter of the storm drain to determine the length of the sock. Add between 2' to 2.5' to the measurement to account for folding the sock and to zip tie the ends. The storm drain in this handout is for the "average" 8' storm drain perimeter. Cut a 10' long sock. If it is for a sidewalk drain, cut (2) pieces, one 6' long and one 4' long. Zip tie 6" away from one end. Hold the other side of the sock open while 1-2 people use hand trowels to scoop the prepared recipe into the sock. Pack the compost material pushing it towards the tied end of the sock and continue adding compost till the sock is 2/3 full of material. Zip tie the other end of the sock leaving 6" at this other end of the sock. Flatten the sock by stepping on it to ensure that the compost sock is making full contact with the ground and edges of the storm drain. SIDEWALK DRAIN: Place the (2) socks around the perimeter of the drain. If it is a sidewalk, ensure that the ends of the socks on the elevated side are on top of the lower sock - see drawing at top. Secure the socks to one another using your hammer/mallet with landscape fabric metal pins. <p style="text-align: right;">Continues on next page →</p> |

9. **STREET DRAIN:** If the sock is located in the street (on a flat surface), pin one end of the 10' sock to the other end of the sock, ensuring there is no gap between the beginning and the end of the sock.



| FREQUENTLY ASKED Qs | ANSWERS |
|---|---|
| How do compost socks work? | The different particle sizes (such as wood chips) in finished compost create porosity which allows for water to pass but blocks/captures medium-large sized soil preventing the soil from washing into the drain. Additionally, contaminants (heavy metals, fecal coliform) and nutrients (nitrogen, potassium) get absorbed by the sock, reducing this contamination and nitrogen overload into our waterways. |
| Can you use this compost sock recipe for diverting water from a drain? | Compost socks can be used either for filtration, or diverting the flow of water. Depending on the use, the compost sock recipe will contain different ratios of compost particle sizes. FILTRATION - When a sock is used for filtering, the compost recipe will largely consist of material greater than 1/2" in order to create enough room for the water to pass through the sock. DIVERSION - When using a compost sock for the diversion of water, the compost recipe will consist of 40% finer sized particles (< 1/2" inch) and 60% of particle size > 1/2". This recipe will prevent water from passing through the sock since it is denser. |
| What if water is flowing over the height of my compost sock or around the edges? | Compost socks can be laid one on top of each other if the water flow is higher than 8". This could happen in a heavy rain storm. You can also place an additional compost sock layer over the first layer creating a double "wall". Secure this second sock layer with 2 to 4 landscape stakes evenly spaced along the length of the sock(s). |
| How long will a compost sock last? | <p>The compost inside of the sock will need to be replaced every 1-3 years because the compost will continue to decompose (break down into smaller particles) and sediment that is trapped will build up in the sock. The more fines in the recipe the more the sock will act as a water diverter (not filter as well).</p> <p>SOCK MATERIAL: a synthetic sock mesh will degrade over 2-4 years' time because it is photodegradable, and plastic lasts longer than natural fibers. Generally, a biodegradable (burlap) sock will have to be replaced within 6 months to 1 year.</p> <p>Monitor wear and tear on the sock and replace it accordingly. Do not use the compost on food crops if you suspect there are heavy metals that have been collected in the sock.</p> <p>What to do with the "spent" compost if there are heavy metals and chemicals? What we have with these contaminants is a lose-lose situation; we don't want to re-introduce these contaminants into our compost system and throwing these contaminants away into our trash will just move these contaminants into a landfill so that is not good either. We like to have people recognize that "there is no away".</p> |