

Compost Filter Sock Demonstration Sites ***Installation Field Notes – 2012/2013***

These notes are provided as an account of installation variables and product performance. While we performed flow calculations to determine spacing and height of socks, the varying pitch of roadside ditches gave us ample opportunity to experiment, observe performance after storm events, and make modifications as needed. We hope these Field Notes will help inform your use of Compost Filter Socks.

St Pierre Rd.– Enosburg Falls

We installed an additional 100' of sock as a retainer on the St. Pierre Rd. site on June 26. The initial installation was done in 2012. The work was an opportunity for new project staff to work with the sock and familiarize herself with installation practices before working with a large volunteer crew.

Hanna Road Site – Franklin

Michael Avery an Americorps worker with the Franklin Watershed located the site by contacting the Town of Franklin road crew. They had just done some ditching on the Hanna Road site and approved our installation of CFS. The Franklin road crew had done some seeding and hay mulching post ditching, however the soil was still bare when we began installation.

The site was scouted on 7/11/2013 and deemed a good match for the proposed grant project. Installation took place on 7/17/2013 with the volunteer help of a VYCC crew. We installed 320 linear feet of sock. The sock was installed perpendicular to the flow of water with a slight u shaped curve heading upflow as a check dam. There were 3 1x2 stakes placed in each section of sock, in the middle and one on each side. The length of the sock sections averaged 8' but were measured specifically to each span of the ditch. For the initial installation the socks were placed so that the top of a downslope sock did not rise above the bottom of upslope sock.

That evening there was a rain event averaging roughly an inch of rain in an hour. The site was inspected the next day, 7/18/2013 to document post rain event conditions. There was a build up of debris on the top of the socks where water had topped the sock. There was no need to clear out behind the sock as sediment build up had not reached the 50% capacity. Some remediation should

be performed at a later date due to trenching due to the flow topping the sock in the steepest section.

On 8/8/2013 project staff returned to the site with another VYCC crew to perform remediation. The distance between socks was shortened from 50' to 25' in the steeper section by adding a single sock and doubled them in the sections with a higher degree of slope. We used an additional 155' for this remediation to make the installation fully functional.

Spoke with the Franklin Town Road Crew after the remediation and they felt that the sock had performed well considering the major storm events we had since the installation. Staff provided the road crew with an explanation of the project and contact info if they had any further questions or updates on the performance of the sock.

Grow Compost of Vermont – Moretown

We installed 140' of sock at Grow Compost of Vermont on 8/2/2013. It was part of a stormwater plan created by Grow Compost's engineer John Grenier. The sock was recommended by Ryan McCall from ANR's stormwater division as an add on steep ditches – one stone lined, one grassed – to filter high flows. Scott and Lisa, owners of Grow Compost are interested in producing sock so this demonstration site was also an opportunity to showcase the sock.

Green Dream Farm – Enosburg Falls

Installed 100' of sock on 8/8/2013 with VYCC crew. Mike Avery from Franklin Watershed contacted landowner Chris Wagner and Chris was interested and allowed us to install the sock in two spots along the edge of a corn field that leads directly to a ditch that feeds the Mill Brook which leads to lake Carmi. Franklin Watershed has a testing site there and we can have access to their water quality data in the future.

Branon Rd. Site – Fairfield

Project staff met with Jim Smith from Technical Services 9/13/2013 to look at a Branon Road site remediation project under a Better Back Roads Grant

Our project supplied the sock and technical services. VYCC crew helped install sock, seed, and mulch with hay and stay matt. Project team also included Jim

Smith from Smith Engineering, Amanda Forbes Fairfield Town Clerk, and Charles Havreluk from Haverluk Construction.

After excavation, project staff installed 160' of sock, 9/20/2013, on Branon Road as check dams. These were placed in sections where stone could not be used because landowner wanted the area seeded down after ditching so it could be mowed as lawn. Landowners were pleased with sock option and seeding instead of stone to slow flows.

Took water quality samples at Branon Rd. Site on 10/31/2013. Obtained samples from two sites, one was at the beginning of the steep grade pre- and post sock and one was just before the rock lined area and culvert pre- and post sock.

Gervais Farm – Enosburg Falls

There was recent tiling in the fields with four (4) outlets with disturbed soil in close proximity to culverts leading to Missisquoi River. With limited sock left for the project we installed 85' at one of the tile outlets with the worst erosion. We also seeded and mulched with winter rye supplied by property owner.

This is a potential site to revisit to compare site with sock and site without sock for documentation. Also, the excavation company will need to do some work to repair erosion in the field. There is an opportunity for future installation.

CFS applications – General Observations

Compost filter socks are typically not a stand alone solution to reduce phosphorus runoff and trap sediment. They work best in conjunction with seeding and mulching to re-establish vegetation to trap sediment, reduce flow, and filter and absorb nutrients. They are not well suited to super high flow situations or in areas where there is constant standing water. If socks are used as check dams on steeper slopes it may be necessary to place stone on the downhill side of the sock to reduce scouring when the socks are topped in high rainfall events.

Compost filter socks are ideal in post-construction applications and field disturbance. At the Hannah Rd. site I spoke with two members of the road crew and they attested to the fact that without the socks there would have been much worse erosion after the major storm events that occurred soon after ditching and sock installation. They agreed that the socks performed well under the circumstances and were pleased with their performance.

Another testament to the fact that they work, Scott Bessette of Long View Farm, moved socks that had been part of an installation in a newly seeded ditch in prior years to an area in a field where tiling had been installed recently. Due to the wet spring he was having erosion issues and struggling to get seed to take. He stated that he saw how the sock worked in the ditch so why not give it a try in the field.

Want more info?

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