

Fibre Rolls

Fibre rolls are long, tubular, mesh sleeves often filled with mulch, straw or other similar organic material. Fibre rolls are used to slow the flow of sediment laden water across a landscape to allow settling of sediments. The rolls are knotted on each end so the length of each roll can easily be customized. Fibre rolls must be installed on contours perpendicular to stormwater flow, across the slope or swale. The ends of the rolls must be angled upslope to direct water flows into the centre of the roll and prevent bypassing of the control (*Figure 1*).



Figure 1
Installed fibre rolls

Fibre Rolls



Figure 2
Joining ends

Figure 3
Inadequate
staking

Installation

To install:

- Dig a shallow trench across the area you plan to install the fibre roll. The trench should be as wide as the fibre roll and half as deep as it is wide. Be sure to include the angled end runs on both ends. Place excavated soil upslope of the trench.
- Lay the fibre roll into the trench and drive a stake through the centre of the roll at least every 1 metre (3'). The stakes should be driven at least 30 cm (12") into the soil leaving a minimum stake height of at least 7.5 cm (3") above the roll.
- Back fill the trench/roll using the excavated soil and pack tightly.
- Ends of rolls must be butted tightly together. It is also recommended that an additional ~ 2 metre (6') length of fibre roll be installed immediately downslope of the ends of the rolls that are butted together for additional protection. (Figure 2).

Maintenance & Removal

Fibre rolls should be inspected regularly and after any significant rainfall event. Damaged rolls should be repaired or replaced immediately. Sediment build up should be removed once it reaches half the height of the roll.

Common issues include:

- Inadequate trenching
- Inadequate staking (Figure 3).

Once the soils on site have been permanently stabilized the fibre roll and stakes can be removed. If desired, the material within the roll can be reused on site as mulch/compost. The fibre roll mesh should be properly disposed unless a biodegradable material is used.

Pros & Cons

Pros

- Largely compostable
- Easily designed and customized
- Flexible and can be filled in place or filled and moved into position, making them especially useful on steep or rocky slopes where installation of other erosion control tools is not feasible.

Cons

- Often damaged due to low-profile design
- Not always readily available
- Should be used in conjunction with other integrated stormwater management practices.

This project was undertaken with the financial support
of the Government of Canada.

Ce projet a été réalisé avec l'appui financier
du gouvernement du Canada.

Canada