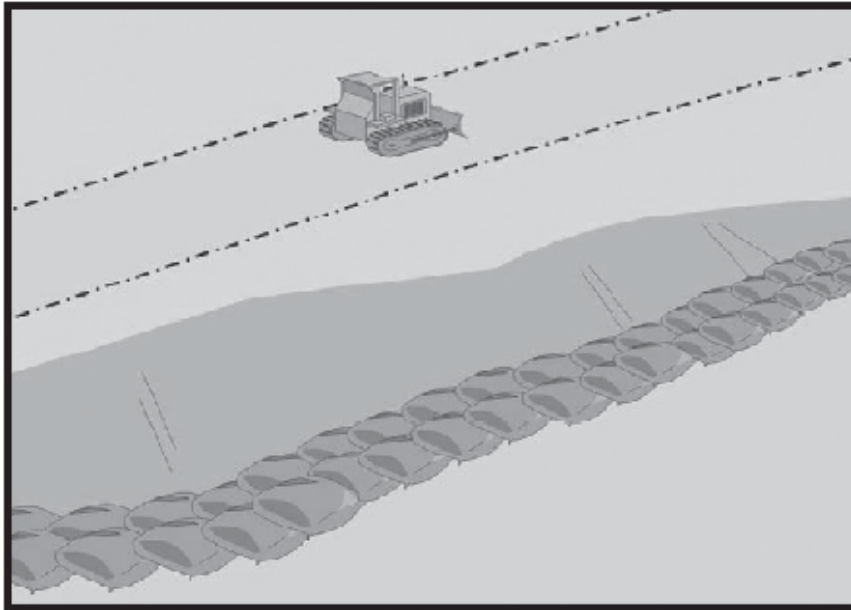


# Sandbag Barrier



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Sandbag barriers are a series of sand-filled bags placed on a level contour to intercept sheet flows. Sandbag barriers provide a relatively quick and efficient way to detain sediment laden stormwater which allows sediment to settle out.

## Usage

Sandbag barriers can be used in the following locations:

- on paved surfaces, where it is difficult to install posts or stakes
- across a channel as a check dam
- in areas where silt fences are not strong enough
- in areas where rock check dam construction is not feasible due to inaccessibility
- in areas where a less-porous filtration barrier is desired; if a more porous barrier is needed, another BMP may be more appropriate (e.g. gravel bag berms) or to construct an outlet structure within the sandbag barrier wall

## Benefits

- deploy easily
- are reusable and inexpensive
- tend to be more durable than straw bales or silt fences
- can be used for purposes other than erosion control, such as weights for securing lighter materials

## Limitations

- does not filter stormwater runoff
- involves labor-intensive installation
- sandbags may rupture upon removal due to degradation
- limit upstream drainage area to 5 ac or less
- if used to detain concentrated flows, maintenance requirements increase

## Estimated Cost

\$0.25-\$0.75/bag for empty sandbags

\$8/cubic yd for sand

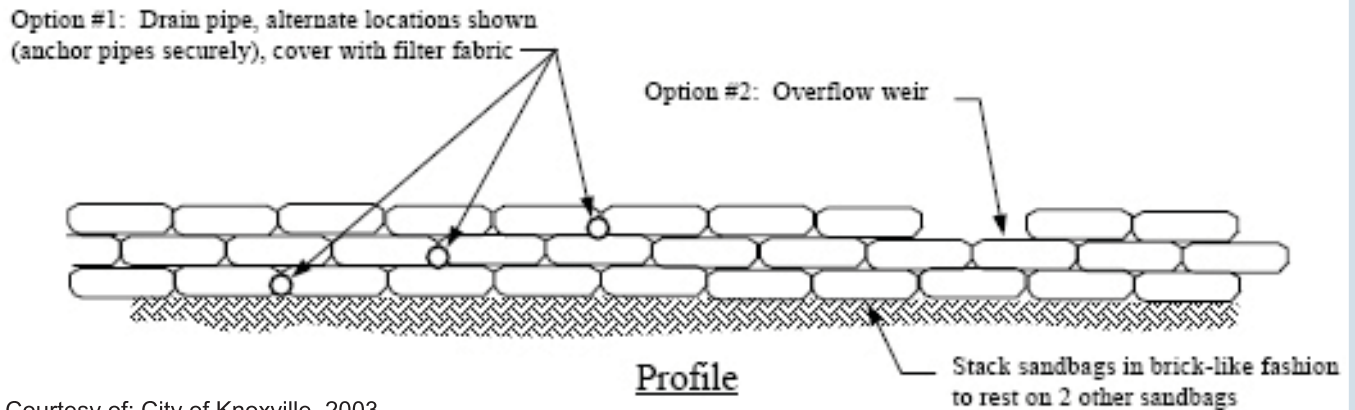
\$2.50 each for pre-filled sandbags

## Alternatives

- Check dam (p. 3-2)
- Fiber roll (p. 3-5)
- Gravel bag berm (p. 3-7)
- Silt fence (p. 3-15)

## Notes:

# Sandbag Barrier



Courtesy of: City of Knoxville, 2003

## Installation Tips

- use woven polypropylene, polyethylene, or polyamide fabric with a weight of at least 4 oz/sq yd for sandbag material
- avoid using burlap for sandbag material
- only clean sand should be used for filling material
- place sandbag barriers on a level contour
- turn the ends of the sandbag barrier upslope to prevent runoff from going around the barrier
- allow space upslope for ponding
- if barriers are more than 2 sandbags high, construct using a pyramid formation
- ensure sandbag dimensions of 18 in long, 12 in wide, 3 in thick, and weigh approximately 33 lbs
- place small sections of 3-4 in PVC pipe within the barrier to drain water; alternatively, an overflow weir can be fashioned by stacking part of barrier to lower height

## Maintenance

- inspect each sandbag barrier weekly and after each rainfall event
- replace damaged sandbags immediately
- reshape sandbags as needed
- inspect barriers for sediment accumulation; remove sediment when it reaches 1/3 of the barrier height

## Vendors

See Appendix page F12-F13

## References

California Stormwater Quality Association (CASQA). 2003. California stormwater best management practices handbook for construction.

City of Knoxville. 2003. Knoxville BMP Manual Erosion & Sediment.