Sandbag Construction

US Army Corps of Engineers
BUILDING STRONG®

Emergency Construction Sandbags

- Typical uses:
  - Where a low and relatively short barrier is required
  - Constricted areas where there is no room for earthfill levees
    - ex. back yards, buildings close to channel
  - Closures / temporary closures
    - ex. Roads, railroad tracks

Emergency Construction Sandbags

- Design section:
  - 1:3 cross section (1 foot high for 3 foot width)
  - 5 foot maximum height
  - 3 foot or less height preferred

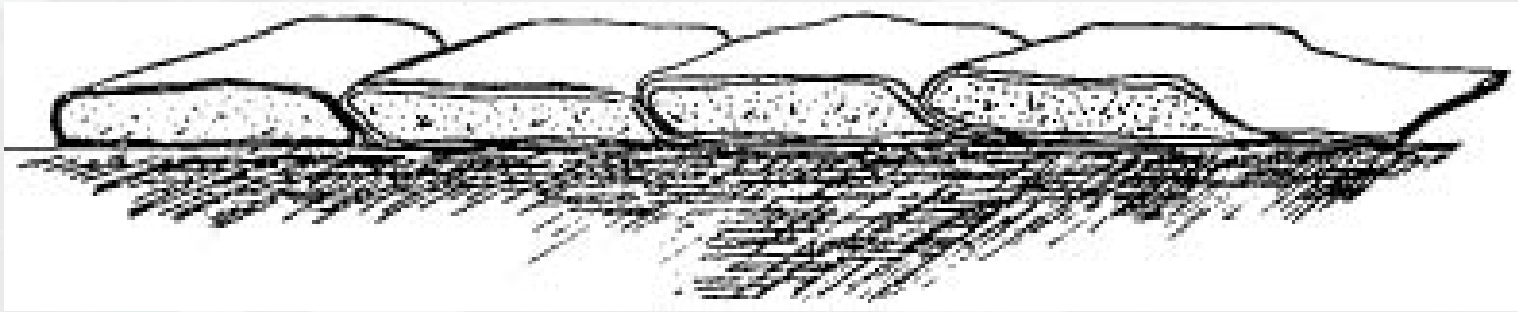
Filling Sandbags

- Fill sacks approximately ½ full
- Do not tie sacks

Placement of Sandbags

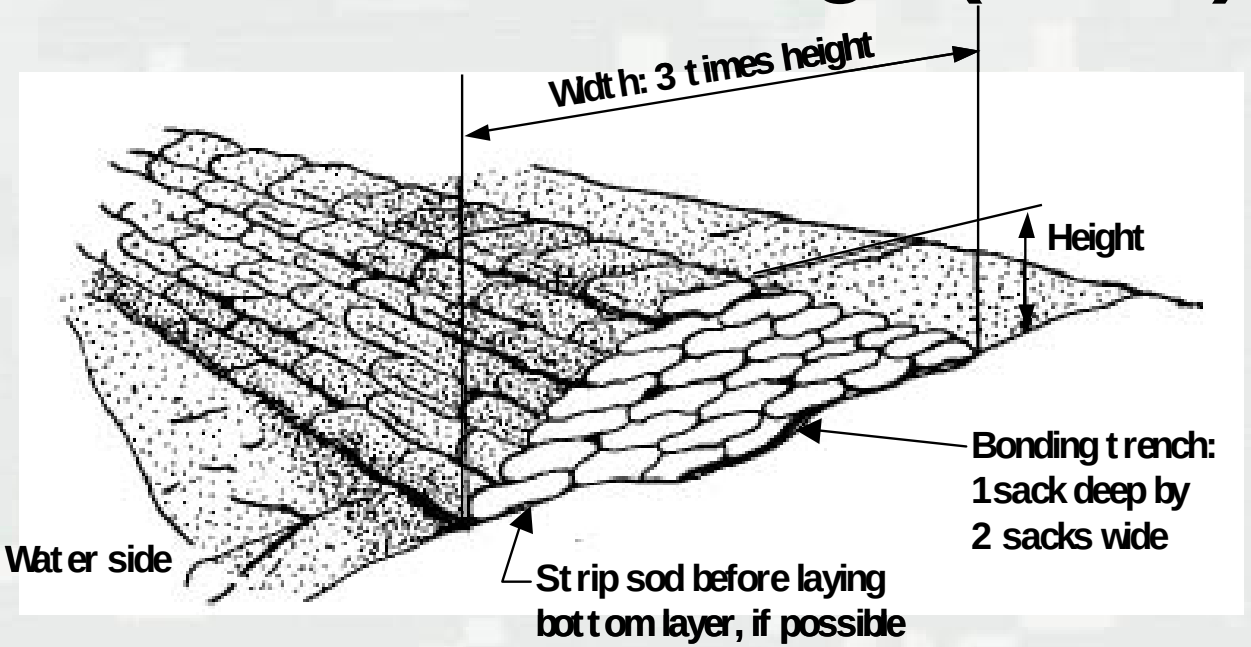
- Start upstream
- Where possible, strip sod / topsoil
- Where possible, excavate bonding trench 1 sack deep by 2 sacks wide
- Alternate direction of placement of bags with bottom layer parallel to flow
- Lap unfilled portion of sandbag under new sack

Placement of Sandbags (cont.)

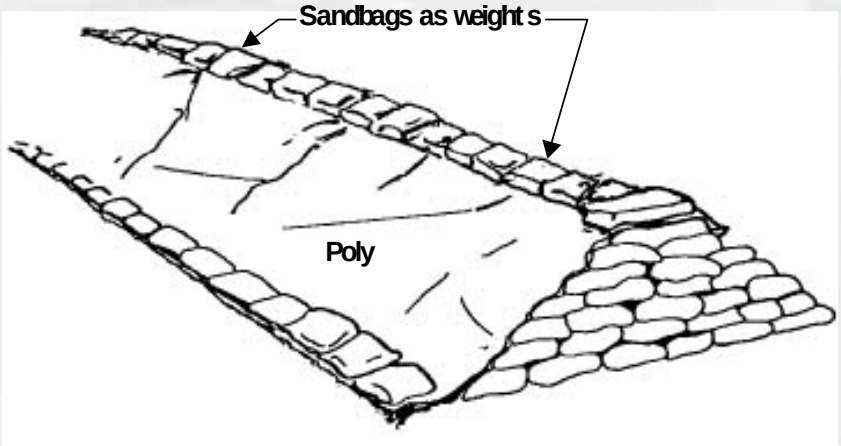


Overlap unfilled portion of sack with filled portion of next sack

Placement of Sandbags (cont.)



Placement of Sandbags (cont.)



Place poly on wet side of sandbag closure to prevent / reduce seepage

Placement of Sandbags (cont.)

- Number of sandbags required per foot of closure vs. sandbag closure height

Height in Feet	Bags Required
1	5
2	10
3	21
4	36
5	55

Sandbag placement exercise

Sandbag ring levee with poly on inside face to prevent seepage

Sandbag ring levee to contain seepage

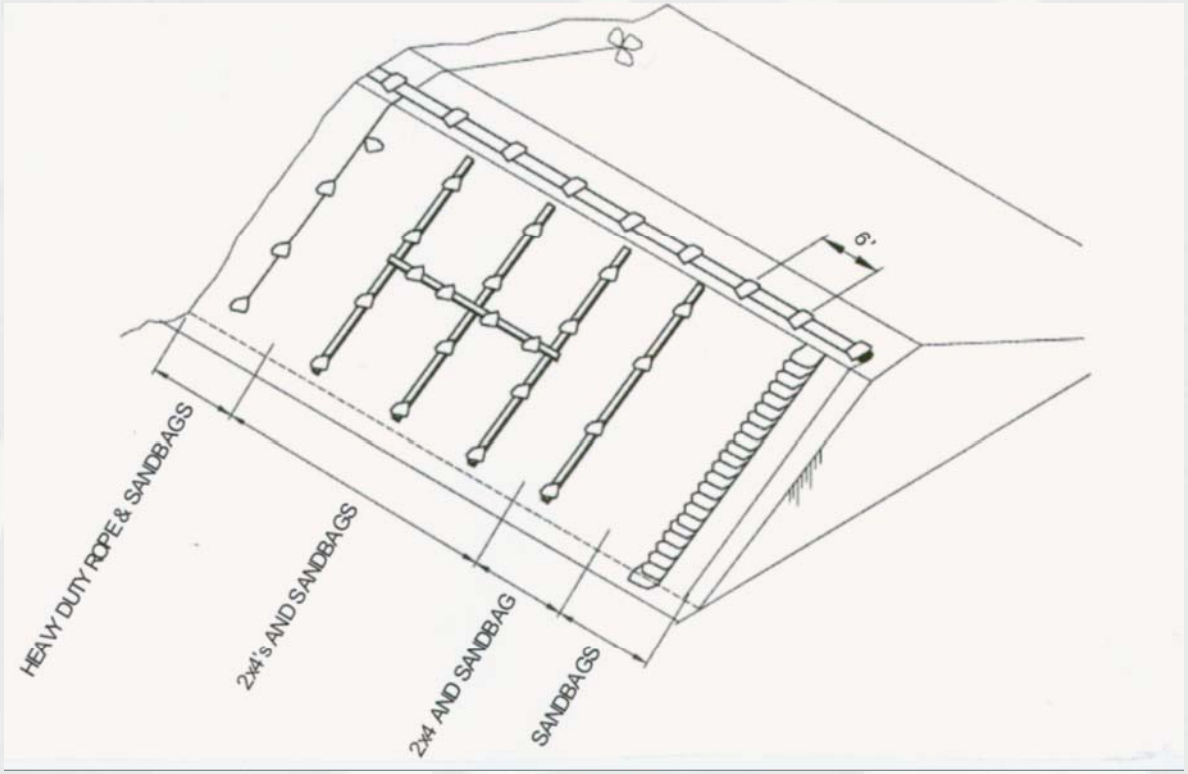
Sandbags placed at apartment building

Seepage/Erosion Protection: Polyethylene Sheeting and Sandbags

Seepage/Erosion Protection: Polyethylene Sheeting and Sandbags

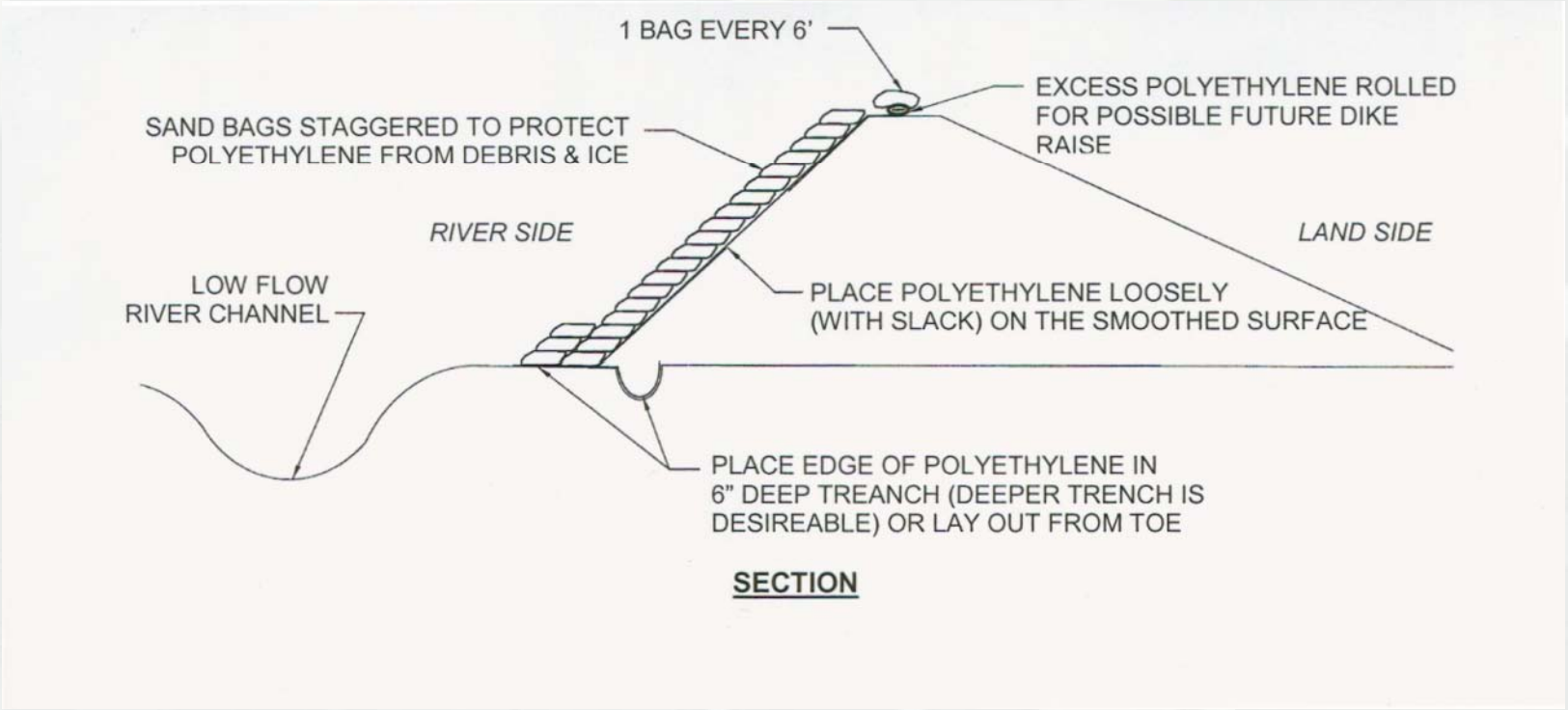
- Polyethylene (poly) Sheeting - ~6 mil thick
- Sandbags used to anchor poly in place
- Placement is fairly quick
- Materials inexpensive
- Place materials in the dry or in the wet

Seepage/Erosion Protection: Poly Sheeting and Sandbags (cont)



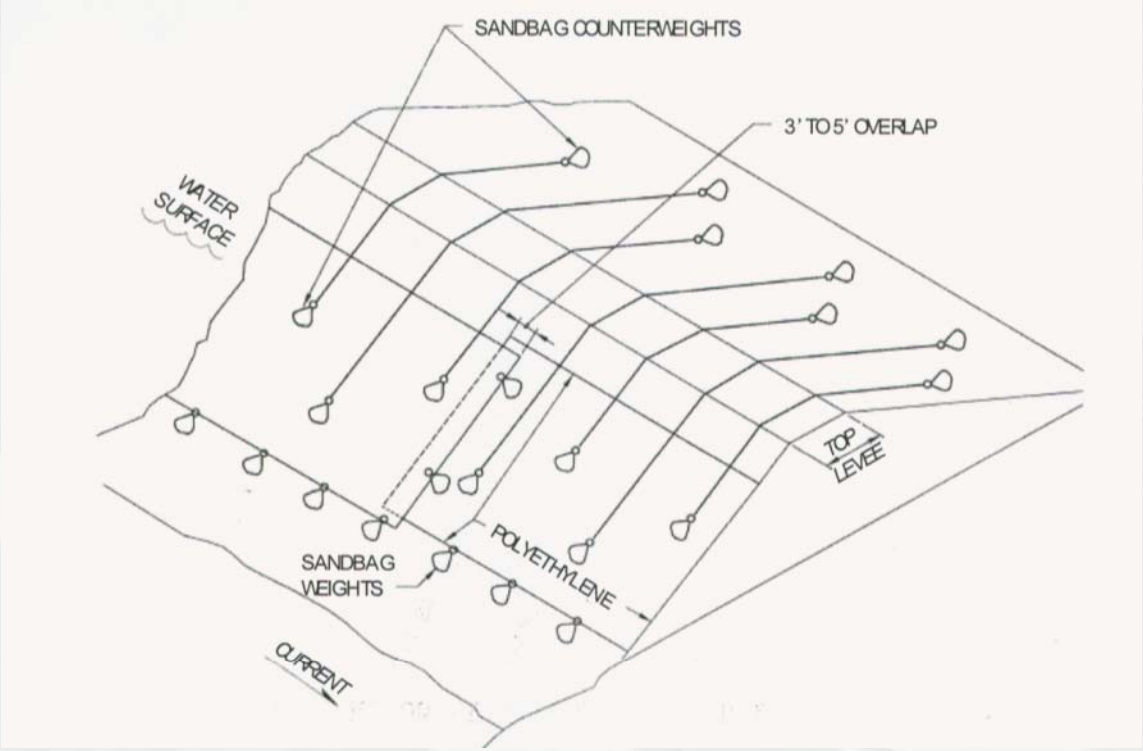
Placement of poly sheeting and sandbags in the dry

Seepage/Erosion Protection: Poly Sheeting and Sandbags (cont)



Placement of poly sheeting and sandbags in the dry

Seepage/Erosion Protection: Poly Sheeting and Sandbags (cont)



Placement of poly sheeting and sandbags in the wet

Placement of poly on riverward side of levee to prevent seepage / erosion. Poly weighted down with sandbags

Placement of poly on riverside of levee to prevent erosion / seepage