# Building Dikes to Prevent Flooding

## HOW TO FILL AND POSITION SANDBAGS

**Standing water from melting snow or heavy rains can flood basements and damage yards, wells, feed supplies, machinery and other property. Flooding is more apt to occur in areas with poor surface drainage, malfunctioning drainage systems or ice dams.**

**A 1- to 3-foot-high sandbag or earth dike offers protection from shallow flooding (water depth less than 3 feet). Contact a construction firm, lumberyard or your county emergency government office for information on where to obtain sandbags.**

## SITE SELECTION

Select the site for the dike, making the best use of natural land features to keep it as short and low as possible. Avoid trees or other obstructions which would weaken the structure. Do not build the dike against a basement wall. Leave about 8 feet of space to maneuver between the dike and buildings. Remove ice and snow, down to the bare ground if possible, from the strip of land you've selected.

## SANDBAG NEEDS

The number of bags required for 100 linear feet of dike is as follows:

- 800 bags for 1-foot-high dike
- 2,000 bags for 2-foot-high dike
- 3,400 bags for 3- foot-high dike

## FILLING AND POSITIONING SANDBAGS

See diagrams on the back side. If you are building the dike on a lawn you may omit the bonding trench shown in the diagram on Stacking Sandbags.

- Fill bags approximately half full of clay, silt or sand. Do not tie.
- Alternate direction of bags with bottom layer lengthwise of dike. Lap unfilled portion under next bag.
- Tamp thoroughly in place.
- Build the dike three times as wide as high. For example, if the height is 3 feet, make the base 9 feet.

## SEALING THE DIKE

Seal the finished dike to increase its watertightness. To seal the dike:

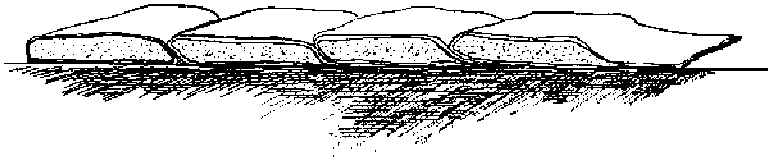
- Spread a layer of earth or sand 1 inch deep and about 1 foot wide along the bottom of the dike on the water side.
- Lay polyethylene plastic sheeting so the bottom edge extends 1 foot beyond the bottom edge of the dike over the loose dirt. The upper edge should extend over the top of the dike. This sheeting is available from construction supply firms, lumberyards and farm stores. It should be about 6 mils thick. It comes in 100-foot rolls and is 8 or 10 feet wide.

- Lay the plastic sheeting down very loosely. The pressure of the water will then make the plastic conform easily with the sandbag surface. If the plastic is stretched too tightly, the water force could puncture it.

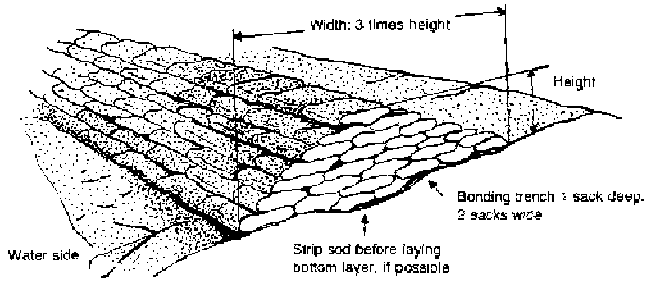
- Place a row of tightly fitting sandbags on the bottom edge of the plastic to form a watertight seal along the water side.

- Place sandbags at about 6 foot intervals to hold down the top edge of the plastic. Place boards or dirt between these sandbags to prevent winds from disturbing the plastic. As you work, avoid puncturing the plastic with sharp objects or by walking on it.

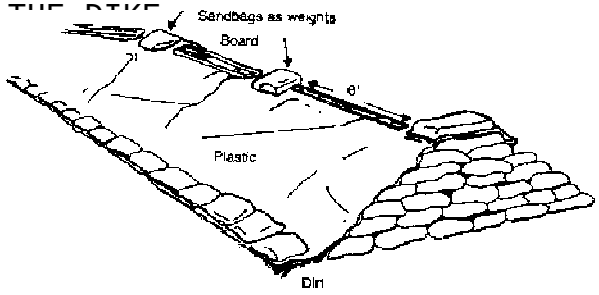
## HOW TO FILL AND LAP SANDBAGS



## STACKING SANDBAGS




## SEALING THE DIKE




**Additional resources:**

Your local emergency government office, your county agricultural agent, the American Red Cross, the Federal Emergency Management Agency